

# CHECKLIST OF THE VASCULAR PLANTS OF WASHINGTON COUNTY, PENNSYLVANIA

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## ABSTRACT

Washington County has been botanized since the early 1800s; however, a checklist of the county's vascular flora has not previously been compiled. A search of herbaria augmented by targeted fieldwork has resulted in a list of 982 taxa of native and naturalized plants comprising 472 genera and 125 families. The five families, with the largest number of species, are, Asteraceae, Poaceae, Cyperaceae, Rosaceae and Fabaceae. *Carex*, *Symphyotrichum*, *Solidago*, *Polygonum*, and *Rubus* are the five largest genera. There are approximately 203 non-native species that have been introduced mainly from Europe and Eurasia. This checklist recognizes 3 species of Lycophytes, 31 species of Pteridophytes, 10 species of Gymnosperms and 911 species of Angiosperms. Forty-one species have global or state ranking.

## RESUMEN

El Condado de Washington, se localiza en el estado de Pennsylvania. Este condado es considerado una de las áreas más diversas en el estado, sin embargo hasta ahora no ha sido completada una lista de verificación. Esta lista de verificación contiene familias, géneros, y taxa específicos están ordenados alfabéticamente dentro de los grupos de plantas vasculares tales como Pteridofitas, Gimnospermas y Angiospermas. Esta lista incluye los nombres de especies nativas y naturalizadas conocidas que ocurren en el Condado de Washington. Un total de al menos 125 familias, 472 géneros, y 955 especies fueron encontradas. Las cinco familias mayores, por el número de especies, fueron Asteraceae, Poaceae, Cyperaceae, Rosaceae y Fabaceae. Los seis géneros más grandes, por el número de especies, fueron *Carex*, *Symphyotrichum*, *Solidago*, *Polygonum* y *Rubus*.

## INTRODUCTION

Even though Pennsylvania lacks checklists for most of its counties, the vascular flora known thus far is quite diverse, Rhoads and Klein (1993) reported 3318 taxa of vascular plants for the state, including 2076 native and 1242 introduced. Approximately 26 of Pennsylvania's 67 counties have floras completed, but some are unpublished theses and surveys and therefore unavailable to the public. The exact number of genera and species in the flora of Washington County was not previously known because a checklist had never been compiled. Currently Washington County is being seriously impacted by coal mining making documentation of the flora all the more urgent. This checklist will be needed when reclamation and revegetation decisions are made of the areas that have been mined for coal. Such checklists provide baseline information that can be used to monitor environmental changes and guide conservation decisions.

Conservation of plant biodiversity, including monitoring of native and/or invasive plants, has not been a priority in Washington County. Three county parks, one state park and six game lands have been created to protect and manage biota. The three county parks consist of Cross Creek, Mingo Creek, Ten Mile Creek and the state park, Hillman State Park, is managed for hunting by the Pennsylvania Game Commission. To-date, no publications have been produced documenting native and/or invasive plants for any area of Washington County.

### **Site Description**

Washington County, Pennsylvania is located in the southwestern corner of the state (Fig. 1). It is bordered by the counties of Beaver and Allegheny to the north, Allegheny, Westmoreland and Fayette to the east, Greene to the south and Marshall, Brooke, and Ohio Counties, West Virginia to the west.

Washington County receives total annual precipitation of approximately 38 inches, of which 55 percent usually falls in April through September. Average seasonal snowfall is 31 inches. The last frost of the season



FIG. 1 Small map contains Counties in Pennsylvania. Larger map consists of Townships in Washington County.

is usually around May 18<sup>th</sup> and the first frost of the season approximately September 25<sup>th</sup>. The length of the growing season, from the last killing frost in spring to the first killing frost in autumn, is about 149 days (USDA 1983).

Wright's Woods in Washington County has been reported by Jeffrey D. Wagner of the Western Pennsylvania Conservancy as an old growth oak forest. Located behind Wright's United Methodist Church in Washington County it is classified as a Mesic central Forest. In Wagner's own words "below the white and red oak (*Quercus alba* and *Q. rubra*) canopy is a sub-canopy and shrub layer of predominately sugar maple (*Acer saccharum*). Basswood (*Tilia sp.*), hackberry (*Celtis occidentalis*), slippery elm (*Ulmus rubra*), white ash (*Fraxinus americana*) and a number of other tree species grow within the oak-sugar maple forest, as do a number of shrub/trees like and spicebush (*Lindera benzoin*), common elderberry (*Sambucus canadensis*), and flowering dogwood (*Cornus florida*). A rich spring flora of trout lily (*Erythronium americanum*), spring beauty (*Claytonia virginica*), false mermaid (*Floerkea proserpinacoides*), virginia waterleaf (*Hydrophyllum virginianum*) and many other species blanket the slopes, particularly the lower slopes. To the east, the slope transforms

to a younger forest of sugar maple and black cherry (*Prunus serotina*), ending eventually at a driveway and several homes. Confined by an old cemetery and road to the west and by old strip mined land that is now residential development to the south and east, this community stands as a remnant of a forest type that likely once covered large parts of the county.

A number of hiking/walking trails run through the forest and some cutting of individual trees (possibly dead or damaged red oaks) has occurred on the lower slopes. The creek itself is open, swampy in places, and appears to have been pastured at one time. Although some invasive exotic plants like garlic mustard (*Alliaria officinalis*), multiflora rose (*Rosa multiflora*) and periwinkle (*Vinca minor*) occur densely in areas surrounding the forest, the interior remains relatively free from these plants. Although this community is destined to transform to a sugar maple forest as the old oaks die, this area will remain, if protected, one of the older forest communities in the country. Critical to the maintenance of this community is limiting disturbance within the forest and expanding, wherever possible, the buffer areas surrounding the forest. Motorized vehicles should be restricted and clearing of vegetation or cutting of trees, even dead or downed trees, should be prohibited (Wagner 1994)."

We observed Wright's Wood in the spring, summer and fall of 2005. The area appeared heavily browsed by deer. In fact it was the least diverse of all our sites for Washington County. The effects of herbivory have not been well documented for Washington County. This site has been possibly altered by selective deer browsing which has reduced species richness and thus species composition. Whether these changes are permanent will be determined in due time and with additional studies.

The soils of the county consist of four main series: Dormont-Culleoka association, Guernsey-Dormont-Culleoka association, Dormont-Culleoka-Newark association, and Udorthents-Culleoka-Dormont association.

The Dormont-Culleoka association consists of hills with benches and ridges. Dormont soils are found predominantly on hillsides and benches and commonly have slips on them. These soils are deep and moderately well drained. They consist of shale, siltstone, limestone and colluvium. The Culleoka soils are mostly on ridges and hilltops but some areas are on hillsides. They consist of limestone, sandstone, siltstone, and shale. Most of this area is wooded or cleared and used for pasture or hay and corn growth.

The Guernsey-Dormont-Culleoka association consists of rolling hills and ridges. Dormont and Culleoka soils are as described above. The Guernsey soils are on hillsides and hilltops and commonly have slips on them. These soils are deep and moderately well drained. These areas were formed in residuum of weathered clay shale, siltstone, and limestone. Most of this area is used for cultivated crops or hay. Steeper hillsides are used for pasture.

The Dormont-Culleoka-Newark association consists of hills and flood plains. Dormont and Culleoka soils are as described above. The Newark soils are on flood plains. These soils are deep and somewhat poorly drained. These areas were formed from an alluvium derived from limestone, sandstone, siltstone, and shale.

The Udorthents-Culleoka-Dormont association consists of hills and areas disturbed by strip mining activities. Dormont and Culleoka soils are as described above. The Udorthents are in the areas used for strip mining. These soils are very shallow to deep and are well drained to somewhat poorly drained. Most of the area is associated with strip-mining or is wooded or reverting to woodland (USDA 1983).

Washington County is part of the Allegheny Plateau west of the Appalachian Mountains. The county's terrain consists of rolling hills. In the northeastern part of the county the hills are gently sloping whereas in the southwestern section they become almost rugged. Elevations range from a high of 1,516 feet to a low of 727 feet above sea level. The Monongahela River, one of the most traveled rivers east of the Mississippi, forms an eastern natural boundary to the county.

Washington County contains five major watersheds. These major watersheds are grouped into two subbasin categories including the Monongahela and the Ohio.

The Monongahela subbasin has a total drainage area of 2737 square miles. It includes the Pennsylvania portion of the Monongahela River, from West Virginia and Maryland to Pittsburgh. The subbasin encom-

passes all of Fayette County, and parts of Greene, Washington, Westmoreland, and Somerset Counties. The Monongahela subbasin in Washington County is divided into the following major watersheds: Middle Monongahela River and Tenmile Creek.

The Middle Monongahela River has a total drainage area of 509 square miles and its major streams include the middle portion of the Monongahela River, Pigeon Creek and Redstone Creek. The Tenmile Creek has a total drainage area of 388 square miles and its major streams include Tenmile Creek and South Fork Tenmile Creek. The Middle Monongahela and Tenmile Watershed show many extremes in water quality due to both man-made and natural causes. The greatest water problem is the pollution of the water resources by the drainage from coal mining operations, and the hundreds of abandoned oil and gas wells that are not properly plugged.

The Ohio subbasin has a total drainage area of 3084 miles. It includes the Pennsylvania portion of the Ohio River, from its beginning at the confluence of the Allegheny and Monongahela Rivers in Pittsburgh to the borders of Ohio and West Virginia. The subbasin encompasses all of Beaver and Lawrence Counties, parts of Allegheny, Bulter, Crawford, Greene, Mercer, Venango and Washington counties. The Ohio subbasin is divided into the following major watersheds: Chartiers Creek, Wheeling-Buffalo Creeks and Raccoon Creek.

Chartiers Creek has a total drainage area of 296 square miles and its major stream is Chartiers Creek. The Wheeling-Buffalo Creek has a total drainage area of 319 square miles and its major stream include Buffalo Creek, Enlow Fork, and Wheeling Creek. Raccoon Creek has a total drainage area of 327 square miles and the major stream is Raccoon Creek. The upper portion of the watershed has numerous surface mines. The lower and central Raccoon Creek watershed contains some of the most actively farmed land in Washington and Beaver Counties. The major impairment in the Raccoon Creek watershed is abandoned mine drainage. Forty miles of the main stem of Raccoon Creek and 30 to 40 miles of tributaries are degraded by mine drainage.

Baseline conditions need to be established for the flora in these watersheds. At this time we can only provide a checklist, however, future watershed conditions need to be determined to detect if the biodiversity is increasing or decreasing. These comparisons will be extremely important because they will reflect the interactions of many of the other indicators, and these comparisons are measurable effects of the management decisions (Pennsylvania DEP Watershed Notebook 2006).

### **History**

The first settlers of southwestern Pennsylvania were primarily English and came from Virginia and Maryland following Braddock's Road to Redstone Fort. These settlers were enticed by the Ohio Company to settle and commence trade with the Indians in the early 1760s. After provincial Pennsylvania's land purchase from the Indians in 1769, a migration of primarily Scotch-Irish people began coming from the eastern counties of Chester, Lancaster, York, and Dauphin as well as those of Northern Maryland. By 1773 the Scotch-Irish population was increasing steadily. Between 1771 and 1775 lands west of the Monongahela River were settled. Most of these lands were obtained under Virginia titles because the price was one fourteenth the cost asked by Pennsylvania. After the Revolution most of the settlers were Scotch-Irish mingled with some English and Germans. During the first half of the 19<sup>th</sup> century scattered settlements grew into boroughs and townships.

Washington County was created on March 28, 1781 from part of Westmoreland County. Both the county and the city are named for George Washington, the first President of the United States.

The first white travelers found only trails or paths made mainly by animals. George Washington's early years as a surveyor enabled him to see the need for a national road through the Allegheny Mountains connecting the eastern seaboard centers with the Ohio Valley and the western frontier. Completed in 1818 and still in use today, the National Pike (Route 40) runs through Washington County. Another major turnpike was the Pittsburgh and Steubenville turnpike, chartered in 1818. It was much used by stagecoaches and travelers from the west until 1855 but ceased entirely when the Pennsylvania Railroad was built. The Wash-

ington and Williamsport Turnpike, which runs from Washington to Monongahela City was completed in 1831 and became a very valuable road for convenience of travel. The first railroad surveys in Washington County were those of the Baltimore and Ohio Railroad. From 1850 to 1901 several major railroads were built and included the Hempfield Railroad, Pittsburgh Southern Railroad, Pittsburgh and Steubenville Railroad, Chartiers Valley Railroad, Pittsburgh, Virginia and Charleston Railroad, and the Waynesburg and Washington Railroad.

Early 18<sup>th</sup>-century farmers and settlers carved a living from the rich soil. The discovery of vast coal deposits, coupled with the industrial revolution, transformed economic life in the county. The manufacture of steel and glass, along with the discovery of oil, further stimulated rapid change and development throughout the region. To date Washington County is Pennsylvania's number one coal producer. Wholesale and retail establishments employ more than 16,500 workers, while the service industry provides over 16,200 jobs. The manufacture of steel and steel by-products represents the largest industrial employer with over 5,000 laborers. Forestry, fishing and other agribusiness's play a key role in the county (Forrest 1926).

The county is divided into 67 municipalities with the majority of the population residing in the urban and suburban areas. The first census taken in 1790 documented that Washington County had a population of nearly 24,000. As of 2005, the population was 206,406. According to the U.S. Census Bureau, the county has a total area of 2,230 km<sup>2</sup> (861 mi<sup>2</sup>), 2,220 km<sup>2</sup> (857 mi<sup>2</sup>) of it is land and 10 km<sup>2</sup> (4 mi<sup>2</sup>) is water (U.S. Census Bureau 2007).

### Major Collectors

Collecting in Washington County for the Carnegie Museum Herbarium began in the early 1800s and has continued to the present. Most of the collectors have been members of the Botanical Society of Western Pennsylvania and the staff of the Section of Botany at Carnegie Museum.

Botanists who have made significant contributions to the knowledge of the Washington County are W.E. Buker, L.K. Henry, O.E. Jennings, L. Speedy, and S.A. Thompson and J.H. Nishida.

### METHODS

This checklist was compiled by searching the herbaria of the Carnegie Museum of Natural History (CM) and Washington and Jefferson College, Biology Department for Washington County specimens. Herbarium collection information was obtained from the Morris Arboretum (MOAR) and the Washington and Jefferson College for 16 samples. Other herbaria that were examined for specimens include the Academy of Natural Sciences of Philadelphia. In addition, fieldwork was conducted targeting underrepresented areas of the county. Most of the collections were made during the last two years, but several specimens date back as far as 1869 and 1885. The majority of the specimens are deposited at the Carnegie Museum of Natural History (CM). Rhoads and Block (2000) was the primary source for plant identification. For generic and species names, we have generally followed the Synthesis of North American Flora (Kartesz 1999). Authorities are abbreviated for the majority of taxa according to Brummitt and Powell (1992).

### RESULTS AND DISCUSSION

This list includes the names of all native and naturalized species known to occur in Washington County. It includes a total of 125 families, 472 genera, and 955 species. The five families with the largest number of species are Asteraceae, Poaceae, Cyperaceae, Rosaceae, and Fabaceae and *Carex*, *Symphyotrichum*, *Solidago*, *Polygonum*, and *Rubus* are the largest genera. This checklist recognizes 3 species of Lycophytes, 31 species of Pteridophytes, 10 species of Gymnosperms, and 911 species of Angiosperms. There are approximately 203 non-native species that have been introduced mainly from Europe and Eurasia. Forty-one species have global or state ranking.

Of the 41 plants that have global or state ranking only *Delphinium exaltatum* has a global ranking of G3 or vulnerable status. The remaining 40 plants are either a G4 or G5 status, indicating an apparently secure

or secure condition globally. *Delphinium exaltatum* contain alternate leaves palmately divided into 3-5 parted segments, 15 cm long, silvery-green abaxially and pubescent above and below. The basal lobes of some of the larger leaves are divided again and make the blade appear 5-lobed. The flowers are in terminal racemes. The 4 purplish-blue petals are dimorphic with the upper two petals expanded at the base and forming a spur. The lateral petals are reflexed in the apical half with long white hairs. The stamens are approximately 30 in number with yellow pollen. The 5 sepals are irregular. The species can be confused with *Delphinium tricorne* however *D. tricorne* is a smaller plant, which flowers much earlier than *D. exaltatum*, May to early June. By July, when *D. exaltatum* is beginning to flower, *D. tricorne* already has set fruit. Most of the collections rich shaded woods and on rocky limestone bluffs. This species is quite conspicuous and may be subject to casual picking or may be dug for gardens.

There are six taxa in the Washington County flora that are listed by the Pennsylvania Department of Agriculture (2007) as noxious weeds. It is therefore illegal to propagate, sell or transport the following taxa in the commonwealth: *Cirsium arvense* (Canadian thistle), *Cirsium vulgare* (bull or spear thistle), *Datura stramonium* (jimsonweed), *Lythrum salicaria* (purple loosestrife), *Polygonum perfoliatum* (mile-a-minute vine), and *Rosa multiflora* (multiflora rose). Other species considered serious invasives' in our native ecosystems are: *Acer platanoides* (Norway maple), *Alliaria petiolata* (garlic mustard), *Celastrus orbiculatus* (oriental bittersweet), *Elaeagnus umbellata* (autumn olive), *Lonicera morrowii* (morrow's honeysuckle), *Lonicera tartarica* (tartarian honeysuckle), *Microstegium vimineum* (Japanese stilt grass), and *Polygonum cuspidatum* (Japanese knotweed) (DCNR 2004).

While this checklist is probably not all-inclusive of every species in Washington County, it is the most comprehensive list presently available.

#### ANNOTATED CHECKLIST OF THE SPECIES OF WASHINGTON COUNTY, PENNSYLVANIA

Taxa are listed according to the following format: taxon name, author(s), {(year) collector and number} **global: state ranking** [Synonyms] and non-native source. We follow the state (**S**) and global (**G**) ranking systems developed by The Nature Conservancy (1996 version). The global numbers are designated from **1** (critically imperiled) to **5** (secure). Other notations include **SH**, which denotes historical occurrence, and **SR**, which indicates reported without persuasive documentation. Synonyms are included for names not in common usage in the state or regional manuals. In cases where there was more than one specimen present in the collection, recent collections of current collectors for the western Pennsylvania region were cited.

Families, genera, and specific and infraspecific taxa are arranged alphabetically within vascular plant groups Angiosperms, Gymnosperms, Lycophytes, and Pteridophytes.

#### ANGIOSPERMS

##### Acanthaceae

*Justicia americana* (L.) Vahl, 2006 L. Speedy LSB-06-505  
*Ruellia strepens* L., 1950 L.K. Henry and W.E. Buker s.n. **G4G5:**  
**S2**

##### Aceraceae

*Acer negundo* L. var. *negundo*, 2005 L. Speedy LSB12-2  
*Acer nigrum* Michx. f., 2005 L. Speedy LSB595  
*Acer platanoides* L., 1985 S.A. Thompson and J.H. Nishida and  
M. Macdonald 2250 Europe  
*Acer rubrum* L. var. *rubrum*, 2006 L. Speedy LS-06-17  
*Acer saccharinum* L., 2005 L. Speedy LSB229-2  
*Acer saccharum* Marsh. var. *saccharum*, 2006 L. Speedy LS-  
06-83

##### Acoraceae

*Acorus calamus* L., 2005 L. Speedy LSB1665

##### Alismataceae

*Alisma subcordatum* Raf., 2005 L. Speedy and M. Bowers  
LSB1031  
*Sagittaria latifolia* Willd., 1954 L.K. Henry and W.E. Buker s.n.

##### Amaranthaceae

*Amaranthus albus* L., 2006 L. Speedy LS-06-927  
*Amaranthus retroflexus* L., 1984 S.A. Thompson and J.H. Nishida  
2097 Tropical America

##### Anacardiaceae

*Rhus aromatica* Ait. var. *aromatica*, 2001 J. Polonoli FG73  
*Rhus copallinum* L. var. *latifolia* Engl., 1970 W.E. Buker s.n.  
*Rhus glabra* L., 1951 L.K. Henry and F.H. Beer s.n.  
*Rhus typhina* L., 2005 L. Speedy and M. Bowers LSB1350-2  
*Toxicodendron radicans* (L.) Kuntze ssp. *radicans*, 2005 L.  
Speedy LSB1661

##### Annonaceae

*Asimina triloba* (L.) Dunal, 1950 L.K. Henry and F.H. Beer s.n.

**Apiaceae**

*Bupleurum rotundifolium* L., 1869 S.W. Knipe s.n. Europe and Central Asia

*Chaerophyllum procumbens* (L.) Crantz var. *procumbens*, 2005 L. Speedy and D. White LSB157

*Cicuta maculata* L., 2005 L. Speedy LSB821

*Conium maculatum* L., 2005 L. Speedy LSB802 Europe

*Cryptotaenia canadensis* (L.) DC., 2005 L. Speedy LSB1004

*Daucus carota* L., 1942 D. Wilson 103 Eurasia

*Erigenia bulbosa* (Michx.) Nutt., 2006 L. Speedy LS-06-21

**G5:S2**

*Heracleum maximum* Bartr., 2005 L. Speedy LSB1160-2

*Osmorhiza claytonii* (Michx.) C.B. Clarke, 2005 L. Speedy LSB584

*Osmorhiza longistylis* (Torr.) DC., 2005 L. Speedy LSB356

*Pastinaca sativa* L., 2006 L. Speedy LS-06-380 Eurasia

*Sanicula canadensis* L. var. *canadensis*, 2005 L. Speedy LSB634

*Sanicula marilandica* L., 1946 E. Mason s.n.

*Sanicula odorata* (Raf.) K.M. Pryer & L.R. Phillippe, 2005 L. Speedy LSB589

*Sanicula trifoliata* Bickn., 2005 L. Speedy LSB1145

*Taenidia integerrima* (L.) Drude, 2005 L. Speedy LSB619

*Thaspium barbinode* (Michx.) Nutt., 2005 L. Speedy LSB588

*Thaspium trifoliatum* (L.) Gray var. *aureum* Britt., 2005 L. Speedy LSB599

*Torilis japonica* (Houtt.) DC., 2005 L. Speedy LSB1007 Europe

*Zizia aurea* (L.) W.D.J. Koch, 2005 L. Speedy LSB532

**Apocynaceae**

*Apocynum androsaemifolium* L., 1929 W.C. Grimm s.n.

*Apocynum cannabinum* L., 2005 L. Speedy LSB823

*Vinca minor* L., 2005 L. Speedy LSB40 Europe

**Aquifoliaceae**

*Ilex verticillata* (L.) Gray, 1887 C.C. Mellor s.n.

**Araceae**

*Arisaema dracontium* (L.) Schott, 2005 L. Speedy LSB706

*Arisaema triphyllum* (L.) Schott ssp. *pusillum* (Peck) Huttleston, 1940 L.K. Henry s.n.

*Arisaema triphyllum* (L.) Schott ssp. *stewardsonii* (Britt.) Huttleston, 2005 L. Speedy LSB963

*Arisaema triphyllum* (L.) Schott ssp. *triphyllum*, 2005 L. Speedy LSB243

*Symplocarpus foetidus* (L.) Salisb. ex Nutt., 2005 L. Speedy LSB1270

**Araliaceae**

*Aralia nudicaulis* L., 2005 L. Speedy and M. Bowers LSB884

*Aralia racemosa* L. ssp. *racemosa*, 2005 L. Speedy and S. Speedy and M. Bowers LSB1525-1

*Panax quinquefolium* L., 1999 J. Polonoli FG24

**Aristolochiaceae**

*Aristolochia macrophylla* Lam., 1888 A.M. Fulton s.n.

*Aristolochia serpentaria* L., 1947 E. Mason s.n.

*Asarum canadense* L., 2005 L. Speedy LSB596

**Asclepiadaceae**

*Asclepias incarnata* L. ssp. *incarnata*, 1999 B.L. Isaac and J.A. Isaac 12075

*Asclepias quadrifolia* Jacq., 2005 L. Speedy LSB643

*Asclepias syriaca* L., 1977 W.E. Buker s.n.

*Asclepias tuberosa* L. ssp. *tuberosa*, 1967 W.E. Buker s.n.

**Asteraceae**

*Achillea millefolium* L. var. *millefolium*, 2005 L. Speedy LSB834 Eurasia

*Ageratina altissima* (L.) King & H.E. Robins. var. *altissima*, 2005 L. Speedy LSB1181

*Ambrosia artemisiifolia* L. var. *artemisiifolia*, 2005 L. Speedy LSB1443

*Ambrosia artemisiifolia* L. var. *elatior* (L.) Descourtils, 1951 L.K. Henry and F.H. Beer s.n.

*Ambrosia trifida* L. var. *trifida*, 1950 L.K. Henry and W.E. Buker s.n.

*Antennaria howellii* Greene ssp. *neodioica* (Greene) Bayer, 1996 B.L. Isaac and J.A. Isaac 8954

*Antennaria howellii* Greene ssp. *petaloidea* (Fern.) Bayer, 1940 L.K. Henry s.n.

*Antennaria parlinii* Fern. ssp. *fallax* (Greene) Bayer & Stebbins, 1952 D. Wilson 32

*Antennaria parlinii* Fern. ssp. *parlinii*, 2005 L. Speedy LSB120

*Anthemis cotula* L., 1889 C.C. Mellor s.n. Europe

*Arctium minus* Bernh., 1995 B.L. Isaac and J.A. Isaac 8340 Eurasia

*Arnoglossum atriplicifolium* (L.) H.E. Robins., 1966 W.E. Buker s.n.

*Arnoglossum muehlenbergii* (Schultz-Bip.) H.E. Robins., 1919 O.E. Jennings and A.E. McKee s.n. **G4:S1**

*Artemisia ludoviciana* Nutt. ssp. *ludoviciana*, 1949 W.E. Buker s.n.

*Artemisia vulgaris* L. var. *vulgaris*, 1940 F.H. Bell 389 Eurasia

*Bidens aristosa* (Michx.) Britt., 1965 N.R. Farnsworth WP-189

*Bidens bipinnata* L., 1950 L.K. Henry and W.E. Buker s.n.

*Bidens cernua* L., 2005 L. Speedy LSB1499

*Bidens connata* Muhl. ex Willd., 1941 F.H. Bell 678

*Bidens frondosa* L., 2005 L. Speedy LSB1498

*Bidens tripartita* L., 2005 L. Speedy LSB1497

*Bidens vulgata* Greene, 1995 B.L. Isaac and J.A. Isaac 8301

*Brickellia eupatorioides* (L.) Shinnars var. *eupatorioides*, 1916 O.E. Jennings s.n.

*Centaurea biebersteinii* DC., 2006 L. Speedy and J. Nusser LS-06-547 Europe

*Cichorium intybus* L., 1950 L.K. Henry and W.E. Buker s.n. Europe

*Cirsium altissimum* (L.) Spreng., 1970 W.E. Buker s.n.

*Cirsium arvense* (L.) Scop., 2005 L. Speedy LSB801 Eurasia

*Cirsium discolor* (Muhl. ex Willd.) Spreng., 1940 L.K. Henry s.n.

*Cirsium muticum* Michx., 2005 L. Speedy and M. Bowers LSB1429

*Cirsium pumilum* (Nutt.) Spreng., 1971 W.E. Buker s.n.

*Cirsium vulgare* (Savi) Ten., 1951 L.K. Henry and F.H. Beer s.n. Eurasia

*Conoclinium coelestinum* (L.) DC., 2005 L. Speedy and M. Bowers and M. Lange LSB1288 **G5:S3**

*Conyza canadensis* (L.) Cronq. var. *canadensis*, 2005 L. Speedy and M. Bowers and M. Lange LSB1294

- Coreopsis tinctoria* Nutt. var. *tinctoria*, 1901 J.A. Shafer s.n.  
*Coreopsis tripteris* L., 1955 W.E. Buker s.n.  
*Eclipta prostrata* (L.) L., 2005 L. Speedy and M. Bowers and M. Lange LSB1331  
*Erechtites hieraciifolia* (L.) Raf. ex DC. var. *hieraciifolia*, 2005 L. Speedy LSB1492  
*Erigeron annuus* (L.) Pers., 2005 L. Speedy LSB997  
*Erigeron philadelphicus* L. var. *philadelphicus*, 2005 L. Speedy LSB278  
*Erigeron pulchellus* Michx. var. *pulchellus*, 1985 S.A. Thompson and J.H. Nishida 2403  
*Erigeron strigosus* Muhl. ex Willd. var. *strigosus*, 1970 W.E. Buker s.n.  
*Eupatorium altissimum* L., 1951 L.K. Henry and F.H. Beer s.n.  
*Eupatorium fistulosum* Barratt, 2005 L. Speedy LSB1632  
*Eupatorium perfoliatum* L. var. *perfoliatum*, 2005 L. Speedy LSB1258  
*Eupatorium purpureum* L. var. *purpureum*, 2005 L. Speedy LSB1150  
*Eupatorium serotinum* Michx., 2005 L. Speedy and M. Bowers and M. Lange LSB1319  
*Eupatorium sessilifolium* L. var. *brittonianum* Porter, 2002 S.P. Grund 2968  
*Eupatorium sessilifolium* L. var. *sessilifolium*, 2005 L. Speedy LSB1228  
*Eurybia divaricata* (L.) Nesom, 2005 L. Speedy LSB1438 [*Aster divaricata* L.]  
*Eurybia macrophylla* (L.) Cass., 1940 L.K. Henry s.n. [*Aster macrophylla* L.]  
*Eurybia schreberi* (Nees) Nees, 2005 L. Speedy LSB1010 [*Aster schreberi* Nees]  
*Euthamia graminifolia* (L.) Greene var. *graminifolia*, 1940 L.K. Henry s.n.  
*Galinsoga quadriradiata* Cav., 2005 L. Speedy LSB1165 Central and South America  
*Gnaphalium uliginosum* L., 2005 L. Speedy and M. Bowers LSB1035 Europe  
*Hasteola suaveolens* (L.) Pojark., 2005 L. Speedy and M. Bowers LSB1393  
*Helenium autumnale* L. var. *autumnale*, 2005 L. Speedy and M. Bowers LSB1431  
*Helenium flexuosum* Raf., 1966 W.E. Buker s.n.  
*Helianthus annuus* L., 1965 N.R. Farnsworth WP-1174  
*Helianthus decapetalus* L., 2005 L. Speedy and M. Bowers LSB1425  
*Helianthus divaricatus* L., 1977 W.E. Buker s.n.  
*Helianthus microcephalus* Torr. & Gray, 2005 L. Speedy LSB1238
- G5:S3**
- Helianthus strumosus* L., 1950 L.K. Henry and W.E. Buker s.n.  
*Helianthus tuberosus* L., 2005 L. Speedy LSB1469  
*Heliopsis helianthoides* (L.) Sweet var. *helianthoides*, 2005 L. Speedy LSB1456  
*Hieracium aurantiacum* L., 1972 L.K. Henry and W.E. Buker s.n. Europe  
*Hieracium caespitosum* Dumort., 2006 L. Speedy LS-06-288 Europe  
*Hieracium gronovii* L., 1975 W.E. Buker s.n.  
*Hieracium paniculatum* L., 2005 L. Speedy LSB1176
- Hieracium piloselloides* Vill., 1947 W.E. Buker s.n. Europe  
*Hieracium scabrum* Michx. var. *scabrum*, 2005 L. Speedy LSB1478  
*Hieracium venosum* L., 2005 L. Speedy LSB637  
*Hypochaeris radicata* L., 2006 L. Speedy LS-06-907 Eurasia  
*Inula helenium* L., 1946 E. Mason s.n. Europe  
*Lactuca biennis* (Moench) Fern., 2006 L. Speedy and M. Bowers LS-06-897  
*Lactuca canadensis* L., 1970 W.E. Buker s.n.  
*Lactuca floridana* (L.) Gaertn. var. *floridana*, 1970 W.E. Buker s.n.  
*Lactuca saligna* L., 1946 W.E. Buker s.n. Europe  
*Lactuca sativa* L., 1940 L.K. Henry s.n. Exotic  
*Lactuca serriola* L., 2006 L. Speedy and D. Sofran LS-06-814 Europe  
*Leucanthemum vulgare* Lam., 2005 L. Speedy LSB923 Europe  
*Liatris spicata* (L.) Willd. var. *spicata*, 1969 W.E. Buker and H. Clark s.n.  
*Matricaria recutita* L., 1947 L.K. Henry s.n. Europe  
*Packera aurea* (L.) A. & D. Love, 1985 S.A. Thompson and J.H. Nishida 2312 [*Senecio aureus* L.]  
*Packera obovata* (Muhl. Ex Willd.) W.A. Weber & A. Love, 2005 L. Speedy LSB80 [*Senecio obovatus* Muhl. Ex Willd.]  
*Packera paupercula* (Michx.) A. & D. Love, 1950 L.K. Henry and F.H. Beer s.n. [*Senecio paupercula* Michx.]  
*Polymnia canadensis* L., 2005 L. Speedy LSB1144  
*Prenanthes alba* L., 1921 S.S. Dickey s.n.  
*Prenanthes altissima* L., 2005 L. Speedy LSB1635  
*Prenanthes crepidinea* Michx., 2006 L. Speedy LS-06-128  
*Prenanthes trifoliolata* (Cass.) Fern., 1969 W.E. Buker s.n.  
*Pseudognaphalium obtusifolium* (L.) Hilliard & Burt ssp. *obtusifolium*, 2005 L. Speedy LSB1477  
*Ratibida pinnata* (Vent.) Barnh., 2006 L. Speedy LS-06-643-2
- G5:SNA**
- Rudbeckia hirta* L. var. *hirta*, 1924 H. Torp s.n.  
*Rudbeckia hirta* L. var. *pulcherrima* Farw., 1967 W.E. Buker s.n.  
*Rudbeckia laciniata* L. var. *laciniata*, 2005 L. Speedy LSB1278  
*Rudbeckia triloba* L. var. *triloba*, 1977 W.E. Buker s.n.  
*Senecio vulgaris* L., 1987 A.W. Cusick 27116 Eurasia  
*Sericocarpus asteroides* (L.) B.S.P., 1955 W.E. Buker s.n.  
*Silphium trifoliatum* L. var. *trifoliatum*, 2006 L. Speedy LS-06-742  
*Smallanthus uvedalius* (L.) Mackenzie ex Small, 2004 R. Coxe s.n.  
*Solidago altissima* L., 2005 L. Speedy LSB1447  
*Solidago arguta* Ait. var. *arguta*, 1944 O.E. Jennings s.n.  
*Solidago bicolor* L., 2005 L. Speedy LSB1636  
*Solidago caesia* L., 2005 L. Speedy LSB1437  
*Solidago canadensis* L. var. *canadensis*, 2005 L. Speedy LSB1473  
*Solidago curtisii* Torr. & Gray, 1984 S.A. Thompson and J.H. Nishida 2095 **G4G5:S1**  
*Solidago flexicaulis* L., 2005 L. Speedy LSB1451  
*Solidago gigantea* Ait., 2005 L. Speedy and M. Bowers LSB1397  
*Solidago juncea* Ait., 2006 L. Speedy LS-06-496  
*Solidago nemoralis* Ait. var. *nemoralis*, 2005 L. Speedy LSB1643



- Solidago patula* Muhl. ex Willd. var. *patula*, 2005 L. Speedy LSB1283-2
- Solidago rugosa* P. Mill. ssp. *aspera* (Ait.) Cronq., 1968 W.E. Buker s.n.
- Solidago rugosa* P. Mill. ssp. *rugosa*, 2005 L. Speedy and M. Bowers LSB1399
- Solidago ulmifolia* Muhl. ex Willd. var. *ulmifolia*, 2005 L. Speedy LSB1225
- Sonchus arvensis* L. ssp. *uliginosus* (Bieb.) Nyman, 1952 L.K. Henry and F.H. Beer s.n. Europe
- Sonchus oleraceus* L., 1951 L.K. Henry and F.H. Beer s.n. Europe
- Symphotrichum cordifolium* (L.) Nesom, 2005 L. Speedy LSB1670 [*Aster cordifolium* L.]
- Symphotrichum drummondii* (Lindl.) Nesom var. *drummondii*, 1967 H.J. Rose s.n. **G5:SH** [*Aster drummondii* Lindl.]
- Symphotrichum lanceolatum* (Willd.) Nesom ssp. *lanceolatum* var. *interior* (Wieg.) Nesom, 2005 L. Speedy LSB1520 [*Aster lanceolatus* Willd. var. *interior* (Wieg.) AG. Jones]
- Symphotrichum lanceolatum* (Willd.) Nesom ssp. *lanceolatum* var. *lanceolatum*, 1951 L.K. Henry and F.H. Beer s.n. [*Aster lanceolatum* Willd.]
- Symphotrichum lateriflorum* (L.) A. & D. Love var. *lateriflorum*, 2005 L. Speedy LSB1448 [*Aster lateriflorum* (L.) Britton var. *lateriflorum*]
- Symphotrichum lowrieianum* (Porter) Nesom, 2005 L. Speedy LSB1630 [*Aster lowrieianum* Porter]
- Symphotrichum novae-angliae* (L.) Nesom, 2006 L. Speedy LS-06-909 [*Aster novae-angliae* L.]
- Symphotrichum phlogifolium* (Muhl. ex Willd.) Nesom, 1949 W.E. Buker s.n. [*Aster phlogifolium* Muhl. ex Willd.]
- Symphotrichum pilosum* (Willd.) Nesom var. *pilosum*, 2006 L. Speedy LS-06-917 [*Aster pilosus* Willd.]
- Symphotrichum pilosum* (Willd.) Nesom var. *pringlei* (Gray) Nesom, 1949 L.K. Henry s.n. [*Aster pilosum* Willd. var. *pringlei* (Gray) Blake]
- Symphotrichum praealtum* (Poir.) Nesom var. *angustior* (Wieg.) Nesom, 1955 W.E. Buker s.n. **G5:S3** [*Aster praealtum* Poir. var. *angustior* Wieg.]
- Symphotrichum prenanthoides* (Muhl. ex Willd.) Nesom, 2005 L. Speedy LSB1450 [*Aster prenanthoides* Muhl. ex Willd.]
- Symphotrichum puniceum* (L.) A. & D. Love var. *puniceum*, 2005 L. Speedy LSB1677 [*Aster puniceus* L.]
- Symphotrichum shortii* (Lindl.) Nesom, 2005 L. Speedy LSB1519 [*Aster shortii* Lindl.]
- Symphotrichum undulatum* (L.) Nesom, 1968 W.E. Buker s.n. [*Aster undulatum* L.]
- Symphotrichum urophyllum* (Lindl.) Nesom, 1955 E. Mason s.n. [*Aster urophyllum* Lindl.]
- Tanacetum vulgare* L., 1940 L.K. Henry s.n. Europe
- Taraxacum laevigatum* (Willd.) DC., 2001 A.W. Cusick 35785 Europe
- Taraxacum officinale* G.H. Weber ex Wiggers, 2005 L. Speedy LSB235 Eurasia
- Tussilago farfara* L., 2005 L. Speedy LSB236 Eurasia
- Verbesina alternifolia* (L.) Britt. ex Kearney, 2005 L. Speedy LSB1449
- Vernonia gigantea* (Walt.) Trel., 2005 L. Speedy LSB1470
- Xanthium strumarium* L. var. *canadense* (P. Mill.) Torr. & Gray, 2005 L. Speedy LSB1494
- Xanthium strumarium* L. var. *glabratum* (DC.) Cronq., 1951 L.K. Henry and F.H. Beer s.n.
- Balsaminaceae**
- Impatiens capensis* Meerb., 2005 L. Speedy LSB922
- Impatiens pallida* Nutt., 2005 L. Speedy LSB919
- Berberidaceae**
- Berberis thunbergii* DC., 2005 L. Speedy LSB266 Japan
- Caulophyllum thalictroides* (L.) Michx., 2005 L. Speedy LSB94
- Jeffersonia diphylla* (L.) Pers., 2005 L. Speedy LSB85
- Podophyllum peltatum* L., 2005 L. Speedy LSB941
- Betulaceae**
- Alnus serrulata* (Ait.) Willd., 2005 L. Speedy and M. Bowers LSB887
- Betula lenta* L., 2005 L. Speedy and M. Bowers LSB886
- Carpinus caroliniana* Walt. ssp. *caroliniana*, 2005 L. Speedy LSB1537
- Carpinus caroliniana* Walt. ssp. *virginiana* (Marsh.) Furlow
- Corylus americana* Walt., 2005 L. Speedy LSB1679-1
- Ostrya virginiana* (P. Mill.) K. Koch var. *virginiana*, 2005 L. Speedy LSB259-2
- Bignoniaceae**
- Campsis radicans* (L.) Seem. ex Bureau, 1970 W.E. Buker s.n.
- Catalpa bignonioides* Walt., 1985 S.A. Thompson and J.H. Nishida 2530
- Catalpa speciosa* (Warder) Warder ex Engelm., 2006 L. Speedy LS-06-289
- Boraginaceae**
- Buglossoides arvensis* (L.) I.M. Johnston, 1940 L.K. Henry s.n. Eurasia
- Cynoglossum officinale* L., 1947 E. Mason s.n. Eurasia
- Cynoglossum virginianum* L. var. *virginianum*, 2006 L. Speedy LS-06-745
- Echium vulgare* L., 2006 L. Speedy LS-06-381 Europe
- Hackelia virginiana* (L.) I.M. Johnston, 2005 L. Speedy LSB995
- Lithospermum latifolium* Michx., 2005 L. Speedy LSB594 **G4:S4**
- Mertensia virginica* (L.) Pers. ex Link, 2005 L. Speedy LSB247
- Myosotis macrosperma* Engelm., 1996 B.L. Isaac and J.A. Isaac 8951
- Myosotis scorpioides* L., 2006 L. Speedy LS-06-237 Europe
- Onosmodium molle* Michx. ssp. *hispidissimum* (Mackenzie) Boivin, 1929 J. Bright 2536 **G4G5T4:S1**
- Symphytum officinale* L., 1964 N.R. Farnsworth SP-220 Eurasia
- Brassicaceae**
- Alliaria petiolata* (Bieb.) Cavara & Grande, 2005 L. Speedy LSB288 Europe
- Arabidopsis thaliana* (L.) Heynh., 1913 O.E. Jennings and G.K. Jennings and A.R. Hillard s.n. Europe
- Arabis canadensis* L., 1950 D.H. Krouse s.n.
- Arabis glabra* (L.) Bernh., 1970 W.E. Buker s.n.
- Arabis laevigata* (Muhl. ex Willd.) Poir. var. *laevigata*, 2005 L. Speedy LSB909

- Barbarea verna* (P. Mill.) Aschers., 1972 G.G. Ingotz Europe  
*Barbarea vulgaris* Ait.f., 2005 L. Speedy LSB286 Eurasia  
*Brassica juncea* (L.) Czern., 1947 W.E. Buker s.n. Eurasia  
*Brassica nigra* (L.) W.D.J. Koch, 1940 L.K. Henry s.n. Eurasia  
*Capsella bursa-pastoris* (L.) Medik., 1951 L.K. Henry and F.H. Beer s.n. Eurasia  
*Cardamine angustata* O.E. Schulz, 1941 L.K. Henry s.n.  
*Cardamine bulbosa* (Schreb. ex Muhl.) B.S.P., 2005 L. Speedy LSB279  
*Cardamine concatenata* (Michx.) Sw., 2005 L. Speedy LSB244  
*Cardamine diphylla* (Michx.) Wood, 2005 L. Speedy LSB269  
*Cardamine douglassii* Britt., 2005 L. Speedy LSB271  
*Cardamine hirsuta* L., 2006 L. Speedy LS-06-5 Europe and Asia  
*Cardamine parviflora* L. var. *arenicola* (Britt.) O.E. Schulz, 1951 L.K. Henry and F.H. Beer s.n.  
*Cardamine pensylvanica* Muhl.ex Willd., 2005 L. Speedy LSB293  
*Cardamine rotundifolia* Michx., 2005 L. Speedy LSB378  
*Draba verna* L., 1937 J.A. Churchill 198 Europe  
*Erysimum cheiranthoides* L., 1951 L.K. Henry and F.H. Beer s.n. Eurasia  
*Hesperis matronalis* L., 2005 L. Speedy LSB950 Europe  
*Iodanthus pinnatifidus* (Michx.) Steud., 2006 L. Speedy LS-06-286 **G5:S1**  
*Lepidium campestre* (L.) Ait. f., 2006 L. Speedy LS-06-378 Eurasia  
*Lepidium virginicum* L. var. *virginicum*, 1919 O.E. Jennings s.n.  
*Rorippa nasturtium-aquaticum* (L.) Hayek, 2005 L. Speedy LSB827  
*Rorippa palustris* (L.) Bess. ssp. *fernaldiana* (Butters & Abbe) Jonsell, 1942 O.E. Jennings s.n.  
*Rorippa palustris* (L.) Bess. ssp. *palustris*, 1947 W.E. Buker s.n.  
*Sibara virginica* (L.) Rollins, 2001 A.W. Cusick 35789 [*Cardamine virginica* L.]  
*Sisymbrium altissimum* L., 1952 D. Wilson 153 Eurasia  
*Sisymbrium officinale* (L.) Scop., 1952 D. Wilson 188 Europe

#### Buxaceae

- Pachysandra terminalis* Sieb. & Zucc., 2002 S.P. Grund 2985 Japan

#### Campanulaceae

- Campanula rapunculoides* L., 1971 W.E. Buker s.n. Eurasia  
*Campanulastrum americanum* (L.) Small, 2005 L. Speedy LSB1001  
*Lobelia inflata* L., 2005 L. Speedy LSB1490  
*Lobelia siphilitica* L. var. *siphilitica*, 2005 L. Speedy LSB1444  
*Lobelia spicata* Lam. var. *spicata*, 1957 W.E. Buker s.n.  
*Triodanis perfoliata* (L.) Nieuwl., 2006 L. Speedy LS-06-393

#### Cannabaceae

- Humulus japonicus* Sieb. & Zucc., 1996 S. Grund 1681 Japan  
*Humulus lupulus* L. var. *lupuloides* E. Small, 2006 L. Speedy LS-06-422

#### Caprifoliaceae

- Lonicera maackii* (Rupr.) Herder, 2006 L. Speedy LS-06-250 Asia

- Lonicera morrowii* Gray, 2005 L. Speedy LSB276 Japan  
*Lonicera tatarica* L., 1972 L.K. Henry and W.E. Buker s.n. Eurasia  
*Sambucus nigra* L. ssp. *canadensis* (L.) R. Bolli, 1952 J. Wilson 121  
*Symphoricarpos albus* (L.) Blake var. *albus*, 1940 L.K. Henry s.n.  
*Symphoricarpos albus* (L.) Blake var. *laevigatus* (Fern.) Blake, 1904 O.E. Jennings s.n.  
*Symphoricarpos orbiculatus* Moench, 1949 W.E. Buker s.n.  
*Triosteum aurantiacum* Bickn. var. *illinoense* (Wieg.) Palmer & Steyermark, 1996 B.L. Isaac and J.A. Isaac 8961  
*Viburnum acerifolium* L., 2005 L. Speedy LSB638  
*Viburnum lantana* L., 2006 L. Speedy LS-06-245 Europe and Asia  
*Viburnum lentago* L., 1887 C.C. Mellor s.n.  
*Viburnum opulus* L. var. *opulus*, 2006 L. Speedy LS-06-258 Eurasia  
*Viburnum prunifolium* L., 2005 L. Speedy LSB284-2

#### Caryophyllaceae

- Arenaria serpyllifolia* L., 1978 F.H. Utech and W.E. Buker 78-056 Europe  
*Cerastium fontanum* Baumg. ssp. *vulgare* (Hartman) Greuter & Burdet, 1904 O.E. Jennings s.n. Eurasia  
*Cerastium glomeratum* Thuill., 1946 L.K. Henry s.n. Eurasia  
*Cerastium nutans* Raf. var. *nutans*, 1996 B.L. Isaac and J.A. Isaac 8969  
*Dianthus armeria* L., 2006 L. Speedy LS-06-374 Europe  
*Myosoton aquaticum* (L.) Moench, 2005 L. Speedy LSB1486 Europe  
*Paronychia canadensis* (L.) Wood, 2005 L. Speedy LSB1216  
*Paronychia fastigiata* (Raf.) Fern. var. *fastigiata*, 1885 B.H. Patterson s.n.  
*Saponaria officinalis* L., 2005 L. Speedy and M. Bowers LSB1432 Europe  
*Silene antirrhina* L., 1947 L.K. Henry s.n.  
*Silene dichotoma* Ehrh., 1952 L.K. Henry and F.H. Beer s.n. Europe  
*Silene nivea* (Nutt.) Muhl. ex Otth, 1869 S.W. Knipe s.n.  
*Silene noctiflora* L., 1920 O.E. Jennings s.n. Europe  
*Silene stellata* (L.) Ait. f., 1994 J.A. Isaac 6051  
*Silene virginica* L. var. *virginica*, 2005 L. Speedy LSB600  
*Silene vulgaris* (Moench) Garcke, 1979 P. Singleton and D.E. Boufford and E.W. Wood 6 Europe  
*Stellaria corei* Shinnars, 1918 O.E. Jennings and G.K. Jennings s.n.  
*Stellaria longifolia* Muhl. ex Willd. var. *longifolia*, 2005 L. Speedy and K. Jurkovic LSB429  
*Stellaria media* (L.) Vill. ssp. *media*, 2005 L. Speedy LSB239 Europe  
*Stellaria pubera* Michx., 1937 C.M. Boardman s.n.
- #### Celastraceae
- Celastrus orbiculata* Thunb., 2005 L. Speedy LSB1666 China and Japan  
*Celastrus scandens* L., 1975 W.E. Buker s.n.  
*Euonymus alata* (Thunb.) Sieb., 2005 L. Speedy LSB367 China and Japan

*Euonymus atropurpurea* Jacq. var. *atropurpurea*, 1990 B.L. Isaac and J.A. Isaac 3098

### Chenopodiaceae

*Atriplex patula* L., 1917 O.E. Jennings et al. s.n.

*Chenopodium album* L. var. *album*, 1940 L.K. Henry s.n. Europe

*Chenopodium album* L. var. *missouriense* (Aellen) I.J. Bassett & C.W. Crompton, 1951 L.K. Henry and F.H. Beer s.n.

*Chenopodium ambrosioides* L. var. *ambrosioides*, 2005 L. Speedy and M. Bowers and M. Lange LSB1317 Central and South America

*Chenopodium berlandieri* Moq. var. *bushianum* (Aellen) Cronq., 1940 L.K. Henry s.n.

*Chenopodium botrys* L., 1979 D.E. Boufford and N. Foust 21188 Europe

*Chenopodium urbicum* L., 1901 J.A. Shafer s.n.

### Cistaceae

*Lechea racemulosa* Michx., 1975 W.E. Buker s.n.

### Clusiaceae

*Hypericum drummondii* (Grev. & Hook.) Torr. & Gray, 1927 O.E. Jennings s.n. **G5: SX**

*Hypericum gentianoides* (L.) B.S.P., 1892 F.T. Aschman s.n.

*Hypericum mutilum* L., 2005 L. Speedy and M. Bowers and M. Lange LSB1305

*Hypericum perforatum* L., 1965 W.E. Buker s.n. Europe

*Hypericum prolificum* L., 2006 L. Speedy LS-06-642

*Hypericum punctatum* Lam., 2005 L. Speedy LSB924

### Commelinaceae

*Commelina communis* L. var. *ludens* (Miq.) C.B. Clarke, 1995 B.L. Isaac and J.A. Isaac 8339 Asia

### Convolvulaceae

*Calystegia pellita* (Ledeb.) G. Don, 1901 J.A. Shafer s.n. Exotic [*Calystegia dahurica* (Herb.) Choisy]

*Calystegia sepium* (L.) R. Br. ssp. *angulata* Brummitt, 2005 L. Speedy LSB817

*Calystegia sepium* (L.) R. Br. ssp. *erratica* Brummitt, 1950 L.K. Henry and W.E. Buker s.n.

*Calystegia silvatica* (Kit.) Griseb. ssp. *fraterniflora* (Mackenzie & Bush) Brummitt, 1940 L.K. Henry s.n.

*Calystegia spithamea* (L.) Pursh ssp. *spithamea*, 2005 L. Speedy LSB635

*Convolvulus arvensis* L., 1901 J.A. Shafer s.n. Europe

*Ipomoea hederacea* Jacq., 1947 W.E. Buker s.n.

*Ipomoea pandurata* (L.) G.F.W. Mey., 1953 W.E. Buker s.n.

### Cornaceae

*Cornus alternifolia* L. f., 2005 L. Speedy LSB639

*Cornus amomum* P. Mill., 2005 L. Speedy LSB813

*Cornus florida* L., 2005 L. Speedy LSB385

*Cornus obliqua* Raf., 1951 L.K. Henry and F.H. Beer s.n. [*Cornus amomum* Mill. subsp. *oblique* (Raf.) J.S. Wilson]

*Cornus racemosa* Lam., 1972 L.K. Henry and W.E. Buker s.n.

*Nyssa sylvatica* Marsh., 1906 O.E. Jennings s.n.

### Crassulaceae

*Hylotelephium telephium* (L.) H. Ohba. ssp. *telephium*, 1951 L.K. Henry and F.H. Beer s.n. Exotic

*Penthorum sedoides* L., 2006 L. Speedy LS-06-481

*Sedum sarmentosum* Bunge, 1987 S.A. Thompson 3707 China

*Sedum ternatum* Michx., 2005 L. Speedy LSB543

### Cucurbitaceae

*Cucurbita pepo* L. var. *pepo*, 1995 B.L. Isaac and J.A. Isaac 8323

*Echinocystis lobata* (Michx.) Torr. & Gray, 2005 L. Speedy and M. Bowers LSB1385

*Sicyos angulatus* L., 2006 L. Speedy and D. Sofran LS-06-809

### Cuscutaceae

*Cuscuta gronovii* Willd. ex J.A. Shultes var. *gronovii*, 2005 L. Speedy LSB1496

### Cyperaceae

*Bulbostylis capillaris* (L.) Kunth ex C.B. Clarke ssp. *capillaris*, 1940 F.H. Bell 400

*Carex aggregata* Mackenzie, 2005 L. Speedy LSB1152

*Carex albicans* Willd. ex Spreng. var. *albicans*, 1921 O.E. Jennings s.n.

*Carex albursina* Sheldon, 2002 J. Polonoli FG115A

*Carex amphibola* Steud., 1984 J.H. Nishida and C.W. Bier 726

*Carex annectens* (Bickn.) Bickn., 2005 L. Speedy and M. Bowers LSB1059

*Carex appalachica* J. Webber & P.W. Ball, 2005 L. Speedy LSB938

*Carex blanda* Dewey, 2005 L. Speedy LSB946

*Carex cephalophora* Muhl. ex Willd., 1951 L.K. Henry and F.H. Beer s.n.

*Carex communis* Bailey var. *communis*, 1996 B.L. Isaac and J.A. Isaac 8949

*Carex conjuncta* Boott, 2005 L. Speedy and M. Bowers LSB864 **G4G5: SNR**

*Carex cristatella* Britt., 2005 L. Speedy LSB1268

*Carex digitalis* Willd. var. *digitalis*, 2006 L. Speedy LS-06-247

*Carex emoryi* Dewey, 2001 M. Bowers s.n.

*Carex frankii* Kunth, 2005 L. Speedy LSB768

*Carex gracilescens* Steud., 1951 L.K. Henry and F.H. Beer s.n.

*Carex granularis* Muhl. ex Willd., 2001 M. Bowers s.n.

*Carex grisea* Wahlenb., 1924 J. Bright s.n.

*Carex gynandra* Schwein., 2001 M. Bowers s.n.

*Carex hirsutella* Mackenzie, 2006 L. Speedy and J. Nusser LS-06-651

*Carex hirtifolia* Mackenzie, 2006 L. Speedy LS-06-386

*Carex hystericina* Muhl. ex Willd., 1965 W.E. Buker s.n.

*Carex interior* Bailey, 1948 F.H. Beer s.n.

*Carex jamesii* Schwein., 1926 J. Bright s.n.

*Carex laevivaginata* (Kukenth.) Mackenzie, 2006 L. Speedy LS-06-482

*Carex laxiculmis* Schwein. var. *laxiculmis*, 2005 L. Speedy LSB993

*Carex laxiflora* Lam. var. *laxiflora*, 1951 L.K. Henry and F.H. Beer s.n.

*Carex lupulina* Muhl. ex Willd., 2005 L. Speedy and M. Bowers LSB1062

*Carex lurida* Wahlenb., 2005 L. Speedy LSB770

*Carex molesta* Mackenzie ex Bright, 1927 J. Bright s.n.

*Carex normalis* Mackenzie, 2006 L. Speedy LS-06-231

- Carex pensylvanica* Lam., 2005 L. Speedy LSB24  
*Carex platyphylla* Carey, 2005 L. Speedy LSB119  
*Carex prasina* Wahlenb., 2006 L. Speedy and Botanical Society of Western PA LS-06-267  
*Carex projecta* Mackenzie, 2006 L. Speedy LS-06-395  
*Carex rosea* Schkuhr ex Willd., 2006 L. Speedy LS-06-480  
*Carex scoparia* Schkuhr ex Willd. var. *scoparia*, 1972 L.K. Henry and W.E. Buker s.n.  
*Carex shortiana* Dewey, 2006 L. Speedy LS-06-419 **G5:S3**  
*Carex sparganioides* Muhl. ex Willd., 1988 K.K. Lutz s.n.  
*Carex squarrosa* L., 2005 L. Speedy and M. Bowers LSB1060  
*Carex stipata* Muhl. ex Willd. var. *stipata*, 2006 L. Speedy LS-06-486  
*Carex stricta* Lam., 2006 L. Speedy LS-06-399  
*Carex torta* Boott ex Tuckerman, 2005 L. Speedy LSB189  
*Carex tribuloides* Wahlenb. var. *tribuloides*, 2005 L. Speedy and M. Bowers LSB1048  
*Carex virescens* Muhl. ex Willd., 1923 O.E. Jennings s.n.  
*Carex vulpinoidea* Michx. var. *vulpinoidea*, 2006 L. Speedy LS-06-398  
*Carex willdenowii* Schkuhr ex Willd., 2002 J. Polonoli FG116A  
*Cyperus bipartitus* Torr., 1993 J.A. Isaac 5403  
*Cyperus esculentus* L., 2005 L. Speedy and M. Bowers LSB1039  
*Cyperus flavescens* L., 1904 O.E. Jennings s.n.  
*Cyperus strigosus* L., 2005 L. Speedy LSB1284  
*Eleocharis acicularis* (L.) Roemer & J.A. Schultes, 1947 W.E. Buker s.n.  
*Eleocharis obtusa* (Willd.) J.A. Schultes, 2005 L. Speedy LSB1260  
*Eleocharis palustris* (L.) Roemer & J.A. Schultes, 1951 L.K. Henry and F.H. Beer s.n.  
*Eleocharis quadrangulata* (Michx.) Roemer & J.A. Schultes, 1951 L.K. Henry and F.H. Beer s.n. **G4:S1**  
*Kyllinga pumila* Michx., 1906 R.E. Schuh s.n.  
*Schoenoplectus tabernaemontani* (K.C. Gmel.) Palla, 2005 L. Speedy LSB806  
*Scirpus atrovirens* Willd., 2005 L. Speedy LSB1277  
*Scirpus cyperinus* (L.) Kunth, 2005 L. Speedy and M. Bowers LSB1379  
*Scirpus hattorianus* Makino, 2005 L. Speedy LSB805  
*Scirpus pedicellatus* Fern., 1993 J.A. Isaac 5401 **G4:S1**  
*Scirpus polyphyllus* Vahl, 2005 L. Speedy LSB1267

#### Dioscoreaceae

- Dioscorea villosa* L., 2006 L. Speedy LS-06-243

#### Dipsacaceae

- Dipsacus fullonum* L., 2006 L. Speedy LS-06-649 Exotic  
*Dipsacus laciniatus* L., 1989 A.W. Cusick 28431

#### Ebenaceae

- Diospyros virginiana* L., 1966 W.E. Buker s.n.

#### Elaeagnaceae

- Elaeagnus umbellata* Thunb. var. *parviflora* (Royle) Schneid., 2005 L. Speedy LSB1459 Asia

#### Ericaceae

- Epigaea repens* L., 2006 L. Speedy and C. Patsche LS-06-74

- Gaultheria procumbens* L., 2006 L. Speedy and C. Patsche LS-06-73

- Gaylussacia baccata* (Wangenh.) K. Koch, 1908 O.E. Jennings s.n.

- Kalmia latifolia* L., 1970 W.E. Buker s.n.

- Vaccinium corymbosum* L., 2005 L. Speedy LSB299

- Vaccinium macrocarpon* Ait., 1944 O.E. Jennings s.n.

- Vaccinium pallidum* Ait., 2005 L. Speedy LSB948

- Vaccinium stamineum* L., 2006 L. Speedy and J. Nusser LS-06-653

#### Euphorbiaceae

- Acalypha rhomboidea* Raf., 2005 L. Speedy LSB1491

- Chamaesyce maculata* (L.) Small, 2005 L. Speedy and M. Bowers and M. Lange LSB1293

- Chamaesyce nutans* (Lag.) Small, 2006 L. Speedy and D. Sofran LS-06-826

- Euphorbia commutata* Engelm., 1946 W.E. Buker s.n.

- Euphorbia corollata* L., 2005 L. Speedy LSB1241

- Euphorbia dentata* Michx. var. *dentata*, 1970 W.E. Buker s.n.

#### Fabaceae

- Amphicarpaea bracteata* (L.) Fern. var. *bracteata*, 2005 L. Speedy LSB1255

- Apios americana* Medik., 1999 B.L. Isaac and J.A. Isaac 12074

- Astragalus canadensis* L. var. *canadensis*, 1948 O.E. Jennings s.n. **G5:S2**

- Baptisia australis* (L.) R. Br. ex Ait. f. var. *australis*, 1980 D.E. Boufford 22155 **G5:S3**

- Cercis canadensis* L. var. *canadensis*, 2005 L. Speedy LSB615

- Coronilla varia* L., 2005 L. Speedy LSB828 Europe

- Cytisus scoparius* (L.) Link var. *scoparius*, 1888 A.M. Fulton s.n. Europe

- Desmodium canadense* (L.) DC., 1969 W.E. Buker s.n.

- Desmodium canescens* (L.) DC., 2006 L. Speedy and D. Sofran LS-06-807

- Desmodium glutinosum* (Muhl ex Willd.) Wood, 2005 L. Speedy LSB937

- Desmodium nudiflorum* (L.) DC., 1995 B.L. Isaac and J.A. Isaac 8341

- Desmodium paniculatum* (L.) DC. var. *paniculatum*, 1955 W.E. Buker s.n.

- Desmodium perplexum* Schub., 1965 W.E. Buker s.n.

- Gleditsia triacanthos* L., 1942 O.E. Jennings s.n.

- Gymnocladus dioica* (L.) K. Koch, 1941 W. Harris s.n.

- Kummerowia stipulacea* (Maxim.) Makino, 1951 L.K. Henry and F.H. Beer s.n. Asia

- Lathyrus sylvestris* L., 2006 L. Speedy and J. Nusser LS-06-609 Africa

- Lespedeza cuneata* (Dum.-Cours.) G. Don, 2006 L. Speedy and J. Nusser LS-06-541 Asia

- Lespedeza frutescens* (L.) Hornem., 2005 L. Speedy LSB1226

- Lespedeza hirta* (L.) Hornem. ssp. *hirta*, 1944 O.E. Jennings s.n.

- Lespedeza procumbens* Michx., 2006 L. Speedy and M. Bowers LS-06-891

- Lespedeza violacea* (L.) Pers., 1939 W.G. Burig s.n.

- Lotus corniculatus* L., 1970 W.E. Buker s.n. Europe

- Medicago lupulina* L., 2005 L. Speedy LSB826 Eurasia

- Medicago sativa* L. ssp. *sativa*, 1886 J.A. Shafer s.n. Eurasia

*Melilotus officinalis* (L.) Lam., 2006 L. Speedy LS-06-284  
Eurasia

*Robinia hispida* L. var. *hispida*, 1979 E.W. Wood and D.E. Boufford 4204

*Robinia pseudoacacia* L., 2006 L. Speedy LS-06-248

*Senna marilandica* (L.) Link, 1917 B.H. Patterson s.n. **G5:S1**

*Strophostyles helvula* (L.) Ell., 2006 L. Speedy LS-06-883

*Thermopsis villosa* (Walt.) Fern. & Schub., 1962 W.E. Buker s.n.

*Trifolium arvense* L., 1904 Houston, M.E. s.n. Eurasia

*Trifolium aureum* Pollich, 1957 W.E. Buker s.n. Eurasia

*Trifolium campestre* Schreb., 1920 O.E. Jennings s.n. Europe

*Trifolium hybridum* L., 1904 O.E. Jennings s.n. Eurasia

*Trifolium pratense* L., 2005 L. Speedy LSB602 Europe

*Trifolium repens* L., 1972 L.K. Henry and W.E. Buker s.n. Europe

*Vicia caroliniana* Walt., 1950 L.K. Henry and F.H. Beer s.n.

*Vicia sativa* L. ssp. *nigra* (L.) Ehrh., 2005 L. Speedy LSB298  
Europe

### Fagaceae

*Castanea dentata* (Marsh.) Borkh., 1904 O.E. Jennings s.n.

*Fagus grandifolia* Ehrh., 2005 L. Speedy LSB1502

*Quercus alba* L., 2005 L. Speedy LSB966-2

*Quercus bicolor* Willd., 1940 L.K. Henry s.n.

*Quercus coccinea* Muenchh. var. *coccinea*, 1922 O.E. Jennings s.n.

*Quercus imbricaria* Michx., 2005 L. Speedy LSB1481

*Quercus macrocarpa* Michx. var. *macrocarpa*, 2006 L. Speedy and M. Bowers LS-06-900-2

*Quercus muehlenbergii* Engelm., 2006 L. Speedy LS-06-746

*Quercus palustris* Muenchh., 2005 L. Speedy LSB296-2

*Quercus robur* L., 1956 R. Cottrell s.n. Europe

*Quercus rubra* L. var. *rubra*, 2005 L. Speedy LSB1504-1

*Quercus velutina* Lam., 2005 L. Speedy LSB1640

*Quercus x leana* Nutt. (pro sp.), 1944 O.E. Jennings s.n.

*Quercus x runcinata* (A. DC.) Engelm., 1964 J.F. Lewis s.n.

### Fumariaceae

*Corydalis flavula* (Raf.) DC., 2005 L. Speedy LSB249

*Dicentra canadensis* (Goldie) Walp., 2005 L. Speedy LSB86

*Dicentra cucullaria* (L.) Bernh., 2005 L. Speedy LSB89

### Gentianaceae

*Gentiana andrewsii* Griseb. var. *andrewsii*, 1917 O.E. Jennings and J. Bright and A.E. McKee s.n.

*Sabatia angularis* (L.) Pursh, 1946 W.E. Buker s.n.

### Geraniaceae

*Erodium cicutarium* (L.) L'Her. ex Ait. ssp. *cutarium*, 2001 A.W. Cusick 35784 Europe

*Geranium maculatum* L., 2005 L. Speedy LSB362

*Geranium pratense* L., 1962 D. Gondella s.n.

*Geranium thunbergii* Sieb. & Zucc. ex Lindl. & Paxton, 2005 L. Speedy LSB1280

### Grossulariaceae

*Ribes cynosbati* L., 2005 L. Speedy LSB110-2

*Ribes rotundifolium* Michx., 1948 E. Mason s.n.

### Haloragaceae

*Myriophyllum spicatum* L., 2006 L. Speedy LS-06-503 Eurasia

### Hamamelidaceae

*Hamamelis virginiana* L., 2005 L. Speedy LSB446

### Hippocastanaceae

*Aesculus flava* Ait., 2005 L. Speedy LSB274-2

*Aesculus glabra* Willd., 2005 L. Speedy LSB131-2

### Hydrangeaceae

*Hydrangea arborescens* L., 2005 L. Speedy LSB857

*Philadelphus pubescens* Loisel. var. *pubescens*, 2006 L. Speedy LS-06-383

### Hydrocharitaceae

*Elodea canadensis* Michx., 2006 L. Speedy LS-06-504

### Hydrophyllaceae

*Hydrophyllum appendiculatum* Michx., 2005 L. Speedy LSB352

*Hydrophyllum canadense* L., 2005 L. Speedy LSB1137

*Hydrophyllum virginianum* L., 2005 L. Speedy and K. Jurkovic LSB433

*Phacelia purshii* Buckl., 2006 L. Speedy et al., LS-06-228

### Iridaceae

*Sisyrinchium angustifolium* P. Mill., 2005 L. Speedy LSB632

### Juglandaceae

*Carya alba* (L.) Nutt. ex Ell., 2005 L. Speedy LSB111

*Carya cordiformis* (Wangenh.) K. Koch, 2005 L. Speedy LSB1207-1

*Carya glabra* (P. Mill) Sweet, 2005 L. Speedy LSB1514

*Carya laciniata* (Michx. f.) G. Don, 1970 A. Liberatore

*Carya ovalis* (Wangenh.) Sarg., 1917 O.E. Jennings and J. Bright and A.E. McKee s.n.

*Carya ovata* (P. Mill) K. Koch, 2005 L. Speedy LSB1651-1

*Juglans cinerea* L., 2005 L. Speedy and B. Brown LSB655

*Juglans nigra* L., 2006 L. Speedy LS-06-262

### Juncaceae

*Juncus articulatus* L., 2006 L. Speedy LS-06-497

*Juncus effusus* L. var. *pylpei* (Laharpe) Fern. & Wieg., 2006 L. Speedy LS-06-290

*Juncus effusus* L. var. *solutus* Fern. & Wieg., 2005 L. Speedy LSB1276

*Juncus tenuis* Willd., 2005 L. Speedy and M. Bowers LSB1071

*Juncus torreyi* Coville, 2005 L. Speedy and M. Bowers LSB1066

### G5:S2

*Luzula multiflora* (Ehrh.) Lej. ssp. *multiflora* var. *multiflora*, 2005 L. Speedy LSB542

### Lamiaceae

*Blephilia ciliata* (L.) Benth., 1970 W.E. Buker s.n.

*Blephilia hirsuta* (Pursh) Benth. var. *hirsuta*, 2005 L. Speedy and M. Bowers LSB858

*Clinopodium vulgare* L., 2006 L. Speedy LS-06-644

*Collinsonia canadensis* L., 2005 L. Speedy LSB1505-1

*Glechoma hederacea* L., 2005 L. Speedy LSB281 Eurasia

*Hedeoma pulegioides* (L.) Pers., 1957 L.K. Henry and F.H. Beer s.n.

*Isanthus brachiatus* (L.) B.S.P., 1904 O.E. Jennings s.n.

*Lamium amplexicaule* L., 1940 L.K. Henry s.n. Eurasia

*Lamium maculatum* L., 1940 R.V. Clark s.n. Eurasia

*Lamium purpureum* L. var. *purpureum*, 2005 L. Speedy LSB187 Eurasia  
*Leonurus cardiaca* L. ssp. *cardiaca*, 1977 W.E. Buker s.n. Asia  
*Lycopus americanus* Muhl. ex W. Bart., 2005 L. Speedy LSB1273  
*Lycopus uniflorus* Michx. var. *uniflorus*, 2005 L. Speedy LSB1521  
*Lycopus virginicus* L., 2005 L. Speedy LSB1201  
*Marrubium vulgare* L., 1901 J.A. Shafer s.n. Eurasia  
*Meehania cordata* (Nutt.) Britt., 2005 L. Speedy and M. Bowers LSB877 **G5:S1**  
*Melissa officinalis* L., 1938 H. Scarton s.n. Asia  
*Mentha arvensis* L., 2005 L. Speedy and M. Bowers and M. Lange LSB1299  
*Mentha x piperita* L. (pro sp.), 2005 L. Speedy and M. Bowers LSB1371 Eurasia  
*Monarda clinopodia* L., 2005 L. Speedy and M. Bowers LSB1026  
*Monarda didyma* L., 2005 L. Speedy and M. Bowers LSB881  
*Monarda media* Willd., 2005 L. Speedy and M. Bowers LSB899  
*Nepeta cataria* L., 1970 L.K. Henry and W.E. Buker s.n. Europe  
*Prunella vulgaris* L. ssp. *lanceolata* (W. Bart.) Hulten, 2005 L. Speedy LSB925  
*Pycnanthemum incanum* (L.) Michx. var. *incanum*, 1952 D. Wilson 156  
*Pycnanthemum tenuifolium* Schrad., 1919 O.E. Jennings and A.E. McKee s.n.  
*Scutellaria incana* Biehler var. *incana*, 2005 L. Speedy LSB1148  
*Scutellaria lateriflora* L. var. *lateriflora*, 2005 L. Speedy and M. Bowers LSB1070  
*Scutellaria nervosa* Pursh, 1951 L.K. Henry and F.H. Beer s.n.  
*Stachys germanica* L., 1943 E. Mason s.n. Europe  
*Stachys nuttallii* Shuttlw. ex Benth., 2004 J.A. Isaac 18573 **G5?:S1**  
*Stachys tenuifolia* Willd., 2005 L. Speedy and M. Bowers and M. Lange LSB1303  
*Teucrium canadense* L. var. *canadense*, 2006 L. Speedy and J. Nusser LS-06-611

**Lauraceae**  
*Lindera benzoin* (L.) Blume var. *pubescens* (Palmer & Steyermark) Rehd., 2005 L. Speedy LSB11-2  
*Sassafras albidum* (Nutt.) Nees, 2005 L. Speedy LSB113-2

**Lemnaceae**  
*Lemna turionifera* Landolt, 1951 L.K. Henry and F.H. Beer s.n. **G5:SU**

**Liliaceae**  
*Allium canadense* L. var. *canadense*, 2005 L. Speedy and B. Brown LSB669  
*Allium cernuum* Roth var. *cernuum*, 2005 L. Speedy LSB943  
*Allium tricoccum* Ait., 1982 W.W. Thomas and S.A. Thompson and M. Ohara 2973  
*Allium vineale* L. ssp. *vineale*, 1972 L.K. Henry and W.E. Buker s.n. Europe  
*Asparagus officinalis* L., 2006 L. Speedy LS-06-249 Europe  
*Camassia scilloides* (Raf.) Cory, 2006 L. Speedy LS-06-241 **G4G5:S1**

*Chionodoxa luciliae* Boiss., 1985 S.A. Thompson and J.H. Nishida and M. Macdonald 2249 Europe  
*Clintonia umbellulata* (Michx.) Morong, 1940 L.K. Henry s.n.  
*Convallaria majalis* L., 1940 R.V. Clark s.n. Europe  
*Erythronium albidum* Nutt., 2006 L. Speedy LS-06-85 **G5:S3**  
*Erythronium americanum* Ker-Gawl. ssp. *americanum*, 2006 L. Speedy LS-06-86  
*Hemerocallis fulva* (L.) L., 1985 S.A. Thompson 2436 Asia  
*Hypoxis hirsuta* (L.) Coville, 2006 L. Speedy LS-06-339  
*Lilium canadense* L. ssp. *canadense*, 1929 W.C. Grimm s.n.  
*Lilium canadense* L. ssp. *editorum* (Fern.) Wherry, 1967 W.E. Buker s.n.  
*Maianthemum canadense* Desf., 1970 W.E. Buker s.n.  
*Maianthemum racemosum* (L.) Link ssp. *racemosum*, 1999 J. Polonoli FG1  
*Narcissus poeticus* L., 1967 W.E. Buker s.n. Europe  
*Ornithogalum umbellatum* L., 2005 L. Speedy and K. Jurkovic LSB402 Europe  
*Polygonatum biflorum* (Walt.) Ell., 2005 L. Speedy LSB628  
*Polygonatum pubescens* (Willd.) Pursh, 2005 L. Speedy LSB905  
*Stenanthium gramineum* (Ker-Gawl.) Morong var. *gramineum*, 1946 E. Mason s.n. **G4G5:S1S2**  
*Trillium erectum* L., 2005 L. Speedy LSB88  
*Trillium flexipes* Raf., 2005 L. Speedy LSB83 **G5:S2**  
*Trillium grandiflorum* (Michx.) Salisb., 2005 L. Speedy LSB90  
*Trillium nivale* Riddell, 2006 L. Speedy LS-06-1 **G4:S3**  
*Trillium sessile* L., 2005 L. Speedy and D. White LSB155  
*Uvularia grandiflora* Sm., 2005 L. Speedy LSB477  
*Uvularia perfoliata* L., 2001 J. Polonoli FG81

#### **Limnanthaceae**

*Floerkea proserpinacoides* Willd., 2005 L. Speedy LSB47

#### **Linaceae**

*Linum virginianum* L., 2005 L. Speedy LSB912

#### **Lythraceae**

*Cuphea viscosissima* Jacq., 1950 L.K. Henry and W.E. Buker s.n.  
*Lythrum salicaria* L., 2005 L. Speedy and M. Bowers and M. Lange LSB1325 Europe

#### **Magnoliaceae**

*Liriodendron tulipifera* L., 2006 L. Speedy LS-06-259  
*Magnolia acuminata* (L.) L., 1904 O.E. Jennings s.n.

#### **Malvaceae**

*Abutilon theophrasti* Medik., 1970 W.E. Buker s.n. Asia  
*Hibiscus trionum* L., 1949 L.K. Henry s.n. Europe  
*Malva moschata* L., 1888 L. Hazzard s.n. Europe  
*Malva neglecta* Wallr., 1952 D. Wilson 215 Africa  
*Sida spinosa* L., 1892 F.T. Aschman s.n.

#### **Menispermaceae**

*Menispermum canadense* L., 2006 L. Speedy and J. Nusser LS-06-539

#### **Molluginaceae**

*Mollugo verticillata* L., 1946 H.N. Mozingo s.n.

#### **Monotropaceae**

*Monotropa uniflora* L., 2005 L. Speedy LSB915

**Moraceae**

*Maclura pomifera* (Raf.) Schneid., 2005 L. Speedy LSB1657-1  
*Morus alba* L., 2006 L. Speedy LS-06-394 Asia

**Oleaceae**

*Fraxinus americana* L., 1987 S.A. Thompson 3702  
*Fraxinus nigra* Marsh., 2005 M. Bowers and B. Owen s.n.  
*Fraxinus pennsylvanica* Marsh., 2005 L. Speedy LSB1041-2  
*Ligustrum vulgare* L., 2005 L. Speedy LSB1668 Europe

**Onagraceae**

*Circaea lutetiana* L. ssp. *canadensis* (L.) Aschers. & Magnus,  
 2005 L. Speedy LSB712  
*Epilobium ciliatum* Raf. ssp. *ciliatum*, 2005 L. Speedy and M.  
 Bowers and M. Lange LSB1297  
*Epilobium coloratum* Biehler, 2005 L. Speedy LSB1254  
*Epilobium parviflorum* Schreb., 2006 L. Speedy and J. Nusser  
 LS-06-604 Europe  
*Gaura biennis* L., 2006 L. Speedy LS-06-877  
*Ludwigia alternifolia* L., 2005 L. Speedy and M. Bowers and  
 M. Lange LSB1320  
*Ludwigia palustris* (L.) Ell., 1951 L.K. Henry and F.H. Beer s.n.  
*Oenothera biennis* L., 1951 L.K. Henry and F.H. Beer s.n.  
*Oenothera fruticosa* L. ssp. *glauca* (Michx.) Straley, 1920 O.E.  
 Jennings s.n.  
*Oenothera parviflora* L., 2005 L. Speedy LSB1656  
*Oenothera perennis* L., 1970 W.E. Buker s.n.

**Orchidaceae**

*Galearis spectabilis* (L.) Raf., 1888 A.M. Fulton s.n.  
*Goodyera pubescens* (Willd.) R. Br. ex Ait.f., 2006 L. Speedy and  
 J. Nusser LS-06-603  
*Liparis liliifolia* (L.) L.C. Rich. ex Ker-Gawl, 2006 L. Speedy and  
 J. Nusser LS-06-713  
*Liparis loeselii* (L.) L.C. Rich., 1995 J.S. Shriver and A. Shriver  
 and C. Smith 390  
*Platanthera lacera* (Michx.) G. Don, 1970 W.E. Buker s.n.  
*Spiranthes cernua* (L.) L.C. Rich., 1994 J.S. Shriver and A. Shriver  
 and C. Smith 345  
*Spiranthes lacera* (Raf.) Raf. var. *gracilis* (Bigelow) Luer, 1950  
 L.K. Henry and W.E. Buker s.n.  
*Spiranthes ochroleuca* (Rybd.) Rybd., 1968 W.E. Buker s.n.

**Orobanchaceae**

*Conopholis americana* (L.) Wallr. f., 2005 L. Speedy LSB1540  
*Epifagus virginiana* (L.) W. Bart. 1942 O.E. Jennings s.n.  
*Orobanche uniflora* L., 1939 O.E. Jennings s.n.

**Oxalidaceae**

*Oxalis corniculata* L., 2005 L. Speedy LSB617  
*Oxalis grandis* Small, 2005 L. Speedy LSB601  
*Oxalis stricta* L., 2005 L. Speedy LSB1489  
*Oxalis violacea* L., 2005 L. Speedy LSB573

**Papaveraceae**

*Chelidonium majus* L. var. *majus*, 2005 L. Speedy LSB265  
 Europe  
*Sanguinaria canadensis* L., 2005 L. Speedy LSB92

**Passifloraceae**

*Passiflora lutea* L., 2004 J.A. Isaac 18574 G5:S1

**Phytolaccaceae**

*Phytolacca americana* L. var. *americana*, 2005 L. Speedy  
 LSB958

**Plantaginaceae**

*Plantago aristata* Michx., 1940 W.G. Burig s.n.  
*Plantago lanceolata* L., 2006 L. Speedy and D. Sofran LS-06-  
 1031 Europe  
*Plantago major* L., 1952 D. Wilson 202  
*Plantago rugelii* Dcne. var. *rugelii*, 2005 L. Speedy LSB1495  
*Plantago virginica* L., 1913 O.E. Jennings s.n.

**Platanaceae**

*Platanus occidentalis* L., 2006 L. Speedy LS-06-495

**Poaceae**

*Agrostis canina* L., 2006 L. Speedy LS-06-1020  
*Agrostis gigantea* Roth, 2005 L. Speedy LSB765 Europe  
*Agrostis hyemalis* (Walt.) B.S.P., 1965 W.E. Buker s.n.  
*Agrostis perennans* (Walt.) Tuckerman, 2005 L. Speedy  
 LSB1642  
*Agrostis scabra* Willd., 1946 R.W. Pohl 5888  
*Agrostis stolonifera* L., 1979 D.E. Boufford and N. Foust 21191  
*Alopecurus pratensis* L., 2001 M. Bowers s.n. Eurasia  
*Andropogon virginicus* L. var. *virginicus*, 1999 B.L. Isaac and  
 J.A. Isaac 12063  
*Anthoxanthum odoratum* L. ssp. *odoratum*, 2005 L. Speedy  
 LSB516 Eurasia  
*Aristida oligantha* Michx., 1960 W.E. Buker s.n.  
*Arrhenatherum elatius* (L.) Beauv. ex J. & K. Presl var. *elatius*,  
 2001 M. Bowers s.n. Europe  
*Brachyelytrum erectum* (Schreb. ex Spreng.) Beauv., 2005 L.  
 Speedy LSB990  
*Bromus commutatus* Schrad., 2005 L. Speedy and M. Bowers  
 LSB1045 Europe  
*Bromus inermis* Leyss. ssp. *inermis* var. *inermis*, 1970 W.E. Buker  
 s.n. Europe  
*Bromus pubescens* Muhl. ex Willd., 1957 W.E. Buker s.n.  
*Bromus secalinus* L., 1907 J.A. Shafer s.n. Europe  
*Cinna arundinacea* L., 2005 L. Speedy LSB1211  
*Dactylis glomerata* L. ssp. *glomerata*, 1985 S.A. Thompson and  
 J.H. Nishida 2408 Europe  
*Danthonia spicata* (L.) Beauv. ex Roemer & J.A. Schultes, 2006  
 L. Speedy LS-06-740  
*Diarrhena americana* Beauv., 2002 B.L. Isaac and J.A. Isaac  
 15791 G4?:S1  
*Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark var.  
*acuminatum*, 2002 J. Polonoli FG123A  
*Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark var. *fas-*  
*ciculatum* (Torr.) Freckmann, 1987 S.A. Thompson 3703  
*Dichanthelium boscii* (Poir.) Gould & C.A. Clark, 1904 O.E.  
 Jennings s.n.  
*Dichanthelium clandestinum* (L.) Gould, 2005 L. Speedy  
 LSB1479  
*Dichanthelium dichotomum* (L.) Gould var. *dichotomum*, 2005  
 L. Speedy LSB1177  
*Dichanthelium latifolium* (L.) Gould & C.A. Clark, 1957 W.E.  
 Buker s.n.  
*Dichanthelium linearifolium* (Scribn. ex Nash) Gould, 2006 L.  
 Speedy and J. Nusser LS-06-543

- Dichanthelium sphaerocarpon* (Ell.) Gould var. *sphaerocarpon*, 1970 W.E. Buker s.n.
- Digitaria ischaemum* (Schreb.) Schreb. ex Muhl., 1919 O.E. Jennings 6272 Eurasia
- Echinochloa crus-galli* (L.) Beauv., 2005 L. Speedy and M. Bowers LSB1364 Eurasia
- Echinochloa muricata* (Beauv.) Fern. var. *muricata*, 2005 L. Speedy LSB1261
- Eleusine indica* (L.) Gaertn., 1919 O.E. Jennings s.n. Old World Tropics
- Elymus hystrix* L. var. *hystrix*, 2005 L. Speedy LSB932
- Elymus riparius* Wieg., 2005 L. Speedy LSB1458
- Elymus villosus* Muhl. ex Willd., 2005 L. Speedy and M. Bowers LSB1024
- Elymus virginicus* L. var. *virginicus*, 2005 L. Speedy and M. Bowers LSB1072
- Eragrostis cilianensis* (All.) Vign. ex Janchen, 1919 O.E. Jennings s.n. Europe
- Eragrostis frankii* C.A. Mey. ex Steud., 2005 L. Speedy and M. Bowers and M. Lange LSB1312
- Eragrostis hypnoides* (Lam.) B.S.P., 2005 L. Speedy and M. Bowers LSB1030
- Eragrostis minor* Host, 1940 F.H. Bell 293 Europe
- Eragrostis pectinacea* (Michx.) Nees ex Steud. var. *pectinacea*, 1919 O.E. Jennings s.n.
- Festuca subverticillata* (Pers.) Alexeev, 2005 L. Speedy LSB1138
- Glyceria striata* (Lam.) A.S. Hitchc., 2005 L. Speedy LSB1205
- Holcus lanatus* L., 2005 L. Speedy LSB918 Europe
- Leersia oryzoides* (L.) Sw., 2005 L. Speedy LSB1264
- Leersia virginica* Willd., 2005 L. Speedy and M. Bowers LSB1025
- Leptochloa fusca* (L.) Kunth ssp. *fascicularis* (Lam.) N. Snow, 1986 A.W. Cusick 25725
- Lolium pratense* (Huds.) S.J. Darbyshire, 2006 L. Speedy LS-06-925 Europe
- Microstegium vimineum* (Trin.) A. Camus, 2006 L. Speedy LS-06-920 Asia
- Muhlenbergia frondosa* (Poir.) Fern., 2006 L. Speedy and M. Bowers LS-06-895
- Muhlenbergia sobolifera* (Muhl. ex Willd.) Trin., 1940 J.M. Fogg Jr. 18351
- Muhlenbergia sylvatica* Torr. ex Gray, 2005 L. Speedy LSB1215
- Muhlenbergia tenuiflora* (Willd.) B.S.P., 2005 L. Speedy LSB1354
- Panicum capillare* L., 1940 L.K. Henry s.n.
- Panicum dichotomiflorum* Michx. var. *dichotomiflorum*, 2006 L. Speedy LS-06-910
- Panicum gattingeri* Nash, 1919 O.E. Jennings s.n.
- Panicum philadelphicum* Bernh. ex Trin., 1983 A.W. Cusick 23226
- Panicum rigidulum* Bosc ex Nees var. *elongatum* (Pursh) Lelong, 2006 L. Speedy and D. Sofran LS-06-824
- Paspalum setaceum* Michx., 1940 F.H. Bell 404
- Pennisetum glaucum* (L.) R. Br., 1940 L.K. Henry s.n. China
- Phalaris arundinacea* L., 2005 L. Speedy LSB824
- Phleum pratense* L., 1952 D. Wilson 161 Europe
- Poa alsodes* Gray, 2005 L. Speedy and K. Jurkovic LSB417
- Poa annua* L., 1947 W.E. Buker s.n. Eurasia
- Poa compressa* L., 2006 L. Speedy LS-06-748 Europe
- Poa cuspidata* Nutt., 2005 L. Speedy LSB74
- Poa pratensis* L. ssp. *pratensis*, 1970 W.E. Buker s.n.
- Poa sylvestris* Gray, 2005 L. Speedy LSB359
- Poa trivialis* L., 2005 L. Speedy LSB969 Europe
- Puccinellia distans* (Jacq.) Parl. ssp. *distans*, 1984 A.W. Cusick 23492
- Schizachyrium scoparium* (Michx.) Nash var. *scoparium*, 1904 O.E. Jennings s.n.
- Sclerochloa dura* (L.) Beauv., 2001 A.W. Cusick 35790 Europe
- Setaria faberi* Herrm., 2006 L. Speedy LS-06-924 Asia
- Setaria pumila* (Poir.) Roemer & J.A. Schultes, 2006 L. Speedy LS-06-735 Europe
- Setaria viridis* (L.) Beauv. var. *viridis*, 1921 S.S. Dickey s.n. Eurasia
- Spartina pectinata* Bosc ex Link, 2006 L. Speedy and D. Sofran LS-06-827
- Sphenopholis intermedia* (Rybd.) Rybd., 1980 D.E. Boufford and E.W. Wood and J. Bawa 22157
- Sphenopholis nitida* (Biehler) Scribn., 1906 O.E. Jennings s.n.
- Tridens flavus* (L.) A.S. Hitchc. var. *flavus*, 2005 L. Speedy and M. Bowers LSB1376
- Polemoniaceae**
- Phlox divaricata* L. ssp. *divaricata*, 2005 L. Speedy LSB355
- Phlox maculata* L. ssp. *maculata*, 1970 W.E. Buker s.n.
- Phlox paniculata* L., 2005 L. Speedy LSB1163
- Polemonium reptans* L. var. *reptans*, 2005 L. Speedy and M. Bowers LSB872
- Polygalaceae**
- Polygala sanguinea* L., 2006 L. Speedy LS-06-906
- Polygala verticillata* L. var. *verticillata*, 1956 E. Mason s.n.
- Polygonaceae**
- Polygonum aviculare* L., 1989 S.A. Thompson 6852 Europe
- Polygonum caespitosum* Blume var. *longisetum* (de Bruyn) A.N. Steward, 2005 L. Speedy LSB1488
- Polygonum convolvulus* L. var. *convolvulus*, 1950 L.K. Henry and W.E. Buker s.n. Europe
- Polygonum cuspidatum* Sieb. & Zucc., 2005 L. Speedy LSB1673 Japan
- Polygonum erectum* L., 1946 W.E. Buker s.n.
- Polygonum hydropiper* L., 1984 S.A. Thompson and J.H. Nishida 2092 Europe
- Polygonum hydropiperoides* Michx., 2005 L. Speedy LSB819
- Polygonum pennsylvanicum* L., 2005 L. Speedy and M. Bowers and M. Lange LSB1327
- Polygonum perfoliatum* L., 2005 L. Speedy LSB1678 Asia
- Polygonum persicaria* L., 2005 L. Speedy LSB1262 Europe
- Polygonum punctatum* Ell. var. *confertiflorum* (Meisn.) Fassett, 2005 L. Speedy and M. Bowers LSB1049
- Polygonum punctatum* Ell. var. *punctatum*, 2006 L. Speedy and D. Sofran LS-06-806
- Polygonum sagittatum* L., 2005 L. Speedy LSB1252
- Polygonum scandens* L. var. *dumetorum* (L.) Gleason, 2005 L. Speedy LSB1493
- Polygonum virginianum* L., 2005 L. Speedy LSB1501



*Rumex acetosella* L., 2005 L. Speedy and K. Jurkovic LSB409 Europe

*Rumex crispus* L. ssp. *crispus*, 2005 L. Speedy LSB675 Europe

*Rumex obtusifolius* L., 2005 L. Speedy LSB809 Europe

#### Portulacaceae

*Claytonia caroliniana* Michx. var. *caroliniana*, 1920 O.E. Jennings s.n.

*Claytonia virginica* L. var. *virginica*, 2005 L. Speedy LSB91

*Portulaca oleracea* L., 1952 D. Wilson 205

#### Potamogetonaceae

*Potamogeton crispus* L., 2006 L. Speedy LS-06-251 Europe

#### Primulaceae

*Anagallis arvensis* L. ssp. *arvensis*, 1901 J.A. Shafer s.n. Eurasia

*Lysimachia ciliata* L., 1984 S.A. Thompson and J.H. Nishida 2114

*Lysimachia nummularia* L., 2005 L. Speedy LSB804 Europe

*Lysimachia quadrifolia* L., 2005 L. Speedy LSB717

#### Pyrolaceae

*Chimaphila maculata* (L.) Pursh, 2005 L. Speedy LSB71

*Pyrola americana* Sweet, 1970 W.E. Buker s.n.

*Pyrola elliptica* Nutt., 2006 L. Speedy LS-06-489

#### Ranunculaceae

*Actaea pachypoda* Ell., 2006 L. Speedy LS-06-254

*Actaea racemosa* L. var. *racemosa*, 2005 L. Speedy and M. Bowers LSB874

*Anemone canadensis* L., 1920 O.E. Jennings s.n.

*Anemone quinquefolia* L. var. *quinquefolia*, 1918 J. Bright s.n.

*Anemone virginiana* L. var. *virginiana*, 2005 L. Speedy LSB904

*Aquilegia canadensis* L., 2006 L. Speedy and Botanical Society of Western PA LS-06-269

*Caltha palustris* L. var. *palustris*, 2005 L. Speedy LSB52

*Clematis virginiana* L., 2005 L. Speedy LSB1467

*Consolida ajacis* (L.) Schur, 1901 J.A. Shafer s.n. Europe

*Delphinium exaltatum* Ait., 2005 L. Speedy LSB1233 **G3:S1**

*Delphinium tricorne* Michx., 2005 L. Speedy LSB373

*Hepatica nobilis* Schreber var. *acuta* (Pursh) Steyermark, 2005 L. Speedy LSB44

*Hepatica nobilis* Schreber var. *obtusata* (Pursh) Steyermark, 2005 L. Speedy LSB26

*Hydrastis canadensis* L., 2006 L. Speedy LS-06-242

*Ranunculus abortivus* L., 2005 L. Speedy LSB590

*Ranunculus acris* L. var. *acris*, 1977 W.E. Buker s.n. Europe

*Ranunculus allegheniensis* Britt., 2005 L. Speedy LSB435

*Ranunculus bulbosus* L., 1982 F.H. Utech and S.A. Thompson and M. Ohara 82-174 Europe

*Ranunculus hispidus* Michx. var. *nitidus* (Chapman) T. Duncan, 2005 L. Speedy LSB377

*Ranunculus micranthus* Nutt., 2005 L. Speedy LSB591

*Ranunculus recurvatus* Poir. var. *recurvatus*, 2005 L. Speedy LSB597

*Ranunculus repens* L., 2005 L. Speedy LSB379 Europe

*Ranunculus sceleratus* L. var. *sceleratus*, 1993 J.A. Isaac 5398

*Thalictrum dioicum* L., 2005 L. Speedy LSB27

*Thalictrum pubescens* Pursh, 2001 J. Polonoli FG86

*Thalictrum revolutum* DC., 1904 O.E. Jennings s.n.

*Thalictrum thalictroides* (L.) Eames & Boivin, 2006 L. Speedy LS-06-334

#### Rhamnaceae

*Ceanothus americanus* L., 1957 W.E. Buker s.n.

*Rhamnus cathartica* L., 1948 M.A. Campbell s.n. Europe

#### Rosaceae

*Agrimonia gryposepala* Wallr., 1966 W.E. Buker s.n.

*Agrimonia parviflora* Ait., 2005 L. Speedy LSB1272

*Agrimonia pubescens* Wallr., 2005 L. Speedy LSB1195

*Amelanchier arborea* (Michx. f.) Fern. var. *arborea*, 2005 L. Speedy LSB1515

*Amelanchier humilis* Wieg., 1923 O.E. Jennings s.n. **G5:S1**

*Amelanchier stolonifera* Wieg., 1923 O.E. Jennings s.n.

*Aruncus dioicus* (Walt.) Fern. var. *dioicus*, 2005 L. Speedy LSB926-1

*Crataegus chrysoarpa* Ashe var. *chrysoarpa*, 2005 L. Speedy LSB240

*Crataegus crus-galli* L., 1921 J. Bright s.n.

*Crataegus dissona* Sarg., 1907 O.E. Jennings and G.K. Jennings tree 35

*Crataegus intricata* Lange, 1907 O.E. Jennings tree 53

*Crataegus iracunda* Beadle, 1907 O.E. Jennings and G.K. Jennings s.n.

*Crataegus pruinosa* (Wendle. f.) K. Koch, 1905 O.E. Jennings and G.E. Kinzer tree 35

*Crataegus punctata* Jacq., 2005 L. Speedy LSB847

*Duchesnea indica* (Andr.) Focke, 2005 L. Speedy LSB289 Asia

*Fragaria virginiana* Duchesne ssp. *grayana* (Vilm. ex J. Gay) Staudt, 2006 L. Speedy LS-06-129

*Fragaria virginiana* Duchesne ssp. *virginiana*, 1951 L.K. Henry and F.H. Beer s.n.

*Geum aleppicum* Jacq., 2005 L. Speedy LSB258

*Geum canadense* Jacq. var. *canadense*, 2005 L. Speedy and M. Bowers LSB1434

*Geum vernum* (Raf.) Torr. & Gray, 2005 L. Speedy LSB280

*Malus baccata* (L.) Borkh., 2005 L. Speedy and B. Brown LSB658 Eurasia

*Malus coronaria* (L.) P. Mill., 2005 L. Speedy and K. Jurkovic LSB395

*Malus floribunda* Sieb. ex Van Houtte, 2005 L. Speedy LSB1474 Asia

*Malus pumila* P. Mill., 2005 L. Speedy LSB191 Eurasia [*Pyrus malus* L.]

*Physocarpus opulifolius* (L.) Maxim. var. *opulifolius*, 2005 L. Speedy LSB640

*Porteranthus trifoliatus* (L.) Britt. 1977 W.E. Buker s.n.

*Potentilla arguta* Pursh ssp. *arguta*, 1919 O.E. Jennings and A.E. McKee s.n.

*Potentilla canadensis* L. var. *canadensis*, 1951 L.K. Henry and F.H. Beer s.n.

*Potentilla canadensis* L. var. *villosissima* Fern., 2005 L. Speedy LSB440

*Potentilla norvegica* L. ssp. *monspeliensis* (L.) Aschers. & Graebn., 1920 O.E. Jennings s.n.

*Potentilla recta* L., 1987 S.A. Thompson 3709 Europe

*Potentilla simplex* Michx., 2006 L. Speedy LS-06-255

*Prunus americana* Marsh., 1978 W.E. Buker s.n.

- Prunus avium* (L.) L., 2006 L. Speedy LS-06-82 Eurasia  
*Prunus mahaleb* L., 2005 L. Speedy LSB716 Europe  
*Prunus serotina* Ehrh. var. *serotina*, 2005 L. Speedy LSB194-1  
*Prunus virginiana* L. var. *virginiana*, 2005 L. Speedy and K. Jurkovic LSB406  
*Rhodotypos scandens* (Thunb.) Makino, 2005 L. Speedy LSB272 Japan  
*Rosa canina* L., 1930 W.C. Grimm s.n. Europe  
*Rosa carolina* L. var. *carolina*, 2005 L. Speedy LSB1223 Asia  
*Rosa eglanteria* L., 1904 O.E. Jennings s.n. Europe  
*Rosa multiflora* Thunb. ex Murr., 2005 L. Speedy LSB829 Asia  
*Rosa palustris* Marsh., 1972 L.K. Henry and W.E. Buker s.n.  
*Rosa setigera* Michx. var. *tomentosa* Torr. & Gray, 2005 L. Speedy LSB766 **G5:SU**  
*Rubus allegheniensis* Porter var. *allegheniensis*, 2005 L. Speedy LSB571  
*Rubus alumnus* Bailey, 1958 H.A. Davis and T. Davis 12147  
*Rubus bellobatus* Bailey, 1958 H.A. Davis and T. Davis 12156  
*Rubus fecundus* Bailey, 1958 H.A. Davis and T. Davis 12154  
*Rubus flagellaris* Willd., 2005 L. Speedy LSB494  
*Rubus idaeus* L. ssp. *strigosus* (Michx.) Focke, 1972 L.K. Henry and W.E. Buker s.n.  
*Rubus laudatus* Berger, 1958 H.A. Davis and T. Davis 12153  
*Rubus michiganensis* (Card ex Bailey) Bailey, 1958 H.A. Davis and T. Davis 12140  
*Rubus multiflorus* Bailey, 1955 H.A. Davis and T. Davis 10953  
*Rubus occidentalis* L., 2005 L. Speedy LSB916  
*Rubus odoratus* L. var. *odoratus*, 2006 L. Speedy LS-06-494  
*Rubus pensilvanicus* Poir., 1961 H.A. Davis and T. Davis 13248  
*Rubus recurvicaulis* Blanch., 2006 L. Speedy and J. Nusser LS-06-552  
*Rubus roribaccus* (Bailey) Rydb., 1958 H.A. Davis and T. Davis 12152  
*Rubus rosa* Bailey, 1958 H.A. Davis and T. Davis 121241  
*Spiraea alba* Du Roi var. *latifolia* (Ait.) Dippel, 1919 O.E. Jennings and A.E. McKee s.n.  
*Spiraea tomentosa* L., 2006 L. Speedy LS-06-737  
*Waldsteinia fragarioides* (Michx.) Tratt. ssp. *fragarioides*, 2006 L. Speedy LS-06-127

### Rubiaceae

- Cephalanthus occidentalis* L., 2005 L. Speedy and M. Bowers LSB1380-2  
*Galium aparine* L., 2005 L. Speedy LSB291  
*Galium asprellum* Michx., 2005 L. Speedy and M. Bowers LSB1046  
*Galium circaezans* Michx. var. *circaezans*, 1967 W.E. Buker s.n.  
*Galium circaezans* Michx. var. *hypomalacum* Fern., 2005 L. Speedy LSB962  
*Galium concinnum* Torr. & Gray, 1946 E. Mason s.n.  
*Galium mollugo* L., 2005 L. Speedy LSB618 Eurasia  
*Galium pilosum* Ait. var. *pilosum*, 1999 J. Polonoli FG4  
*Galium tinctorium* (L.) Scop., 2005 L. Speedy LSB1263  
*Galium triflorum* Michx., 2005 L. Speedy LSB906  
*Houstonia caerulea* L., 2005 L. Speedy LSB59  
*Houstonia canadensis* Willd. ex Roemer & J.A. Schultes, 2005 L. Speedy LSB612  
*Houstonia longifolia* Gaertn., 1920 O.E. Jennings s.n.  
*Mitchella repens* L., 1970 L.K. Henry and W.E. Buker s.n.

### Rutaceae

- Zanthoxylum americanum* P. Mill., 1940 L.K. Henry s.n.

### Salicaceae

- Populus balsamifera* L. ssp. *balsamifera*, 1906 O.E. Jennings s.n. **G5:S1**  
*Populus grandidentata* Michx., 2006 L. Speedy and J. Nusser LS-06-551  
*Salix alba* L., 1919 O.E. Jennings and E.M. Gress s.n. Eurasia  
*Salix caroliniana* Michx., 1908 O.E. Jennings s.n. **G5:S1**  
*Salix discolor* Muhl., 1919 O.E. Jennings and E.M. Gress s.n.  
*Salix eriocephala* Michx., 1979 D.E. Boufford and E.W. Wood and W.E. Buker 20553  
*Salix fragilis* L., 1970 L.K. Henry and W.E. Buker s.n. Europe  
*Salix interior* Rowlee, 1978 W.E. Buker s.n.  
*Salix nigra* Marsh., 2005 L. Speedy LSB690-2  
*Salix pupurea* L., 2005 L. Speedy LSB691-2 Europe  
*Salix sericea* Marsh., 2005 L. Speedy LSB197-2

### Saxifragaceae

- Chrysosplenium americanum* Schwein. ex Hook., 1970 W.E. Buker and L.K. Henry s.n.  
*Heuchera americana* L. var. *americana*, 2006 L. Speedy LS-06-387  
*Mitella diphylla* L., 2005 L. Speedy and K. Jurkovic LSB420  
*Saxifraga virginiana* Michx. var. *virginiana*, 2005 L. Speedy LSB75

### Scrophulariaceae

- Agalinis tenuifolia* (Vahl) Raf. var. *tenuifolia*, 2005 L. Speedy LSB1641  
*Chaenorhinum minus* (L.) Lange, 2006 L. Speedy LS-06-281 Europe  
*Chelone glabra* L., 2005 L. Speedy and M. Bowers LSB1427  
*Collinsia verna* Nutt., 2005 L. Speedy LSB370 **G5:S4**  
*Gratiola neglecta* Torr., 2005 L. Speedy and M. Bowers LSB880  
*Linaria vulgaris* P. Mill., 1940 L.K. Henry s.n. Eurasia  
*Lindernia dubia* (L.) Pennell var. *dubia*, 2005 L. Speedy and M. Bowers LSB1033  
*Mimulus ringens* L. var. *ringens*, 2005 L. Speedy LSB1257  
*Pedicularis canadensis* L. ssp. *canadensis*, 1970 W.E. Buker s.n.  
*Penstemon digitalis* Nutt. ex Sims, 2006 L. Speedy LS-06-420  
*Penstemon hirsutus* (L.) Willd., 1930 W.C. Grimm s.n.  
*Penstemon laevigatus* Ait., 1954 L.K. Henry s.n. **G5:S3**  
*Scrophularia lanceolata* Pursh, 1970 W.E. Buker s.n.  
*Scrophularia marilandica* L., 2005 L. Speedy LSB1465  
*Verbascum blattaria* L., 2006 L. Speedy LS-06-377 Eurasia  
*Verbascum thapsus* L., 1950 L.K. Henry and W.E. Buker s.n. Eurasia  
*Veronica americana* Schwein. ex Benth., 2006 L. Speedy LS-06-485  
*Veronica anagallis-aquatica* L., 1952 D. Wilson 101 **G5:S1**  
*Veronica arvensis* L., 1921 O.E. Jennings s.n. Eurasia  
*Veronica officinalis* L. var. *officinalis*, 2005 L. Speedy LSB560  
*Veronica peregrina* L. ssp. *peregrina*, 2005 L. Speedy LSB608  
*Veronica persica* Poir., 2001 A.W. Cusick 35787 Eurasia  
*Veronica serpyllifolia* L. ssp. *serpyllifolia*, 2006 L. Speedy LS-06-234 Europe  
*Veronicastrum virginicum* (L.) Farw., 1931 W.C. Grimm s.n.

**Simaroubaceae**

*Ailanthus altissima* (P. Mill.) Swingle, 2006 L. Speedy and D. Sofran LS-06-819 Asia

**Smilacaceae**

*Smilax herbacea* L., 2006 L. Speedy and J. Nusser LS-06-537  
*Smilax tamnoides* L., 2005 L. Speedy LSB1676

**Solanaceae**

*Datura stramonium* L., 1970 W.E. Buker s.n.  
*Nicandra physalodes* (L.) Gaertn., 1962 M.G. Netting s.n. Peru  
*Petunia x atkinsiana* D. Don ex Loud., 1940 L.K. Henry s.n. Exotic  
*Physalis heterophylla* Nees var. *heterophylla*, 2005 L. Speedy and M. Bowers LSB1028  
*Physalis longifolia* Nutt. var. *subglabrata* (Mackenzie & Bush) Cronq., 2005 L. Speedy and M. Bowers and M. Lange LSB1298  
*Solanum carolinense* L. var. *carolinense*, 1995 B.L. Isaac and J.A. Isaac 8338  
*Solanum dulcamara* L. var. *dulcamara*, 2005 L. Speedy LSB825 Eurasia  
*Solanum ptycanthum* Dunal, 2006 L. Speedy and D. Sofran LS-06-812 [*Solanum ptychanthum* Dunal]

**Staphyleaceae**

*Staphylea trifolia* L., 2005 L. Speedy LSB484

**Thymelaeaceae**

*Dirca palustris* L., 2002 S.P. Grund 2967

**Tiliaceae**

*Tilia americana* L. var. *americana*, 2005 L. Speedy LSB1675  
*Tilia americana* L. var. *heterophylla* (Vent.) Loud., 2005 L. Speedy LSB1543

**Typhaceae**

*Typha angustifolia* L., 1952 D. Wilson 249  
*Typha latifolia* L., 2005 L. Speedy LSB1660

**Ulmaceae**

*Celtis occidentalis* L., 2006 L. Speedy LS-06-263  
*Ulmus americana* L., 2005 L. Speedy and K. Jurkovic LSB388  
*Ulmus rubra* Muhl., 2006 L. Speedy LS-06-18

**Urticaceae**

*Boehmeria cylindrica* (L.) Sw., 2005 L. Speedy LSB1439  
*Laportea canadensis* (L.) Weddell, 2005 L. Speedy and M. Bowers LSB1387  
*Parietaria pensylvanica* Muhl. ex Willd., 1951 L.K. Henry and F.H. Beer s.n.  
*Pilea pumila* (L.) Gray var. *pumila*, 2005 L. Speedy LSB1508  
*Urtica dioica* L. ssp. *dioica*, 1952 D. Wilson 122 Europe  
*Urtica dioica* L. ssp. *gracilis* (Ait.) Seland., 2005 L. Speedy LSB844

**Valerianaceae**

*Valeriana pauciflora* Michx., 2005 L. Speedy LSB592  
*Valerianella chenopodiifolia* (Pursh) DC., 2005 L. Speedy LSB607  
*Valerianella umbilicata* (Sullivant) Wood, 1951 L.K. Henry and F.H. Beer s.n.

**Verbenaceae**

*Glandularia canadensis* (L.) Nutt., 1901 J.A. Shafer s.n. [*Glandularia drummondii* (Lindl.) Small]  
*Phryma leptostachya* L., 1954 L.K. Henry and W.E. Buker s.n.  
*Verbena hastata* L. var. *hastata*, 2005 L. Speedy and M. Bowers and M. Lange LSB1301  
*Verbena urticifolia* L. var. *leiocarpa* Perry & Fern., 1940 L.K. Henry s.n.  
*Verbena urticifolia* L. var. *urticifolia*, 2005 L. Speedy LSB1663

**Violaceae**

*Hybanthus concolor* (T.F. Forst.) Spreng., 2005 L. Speedy LSB593  
*Viola affinis* Le Conte, 1940 L.K. Henry  
*Viola canadensis* L. var. *canadensis*, 2002 S.P. Grund 2982  
*Viola cucullata* Ait., 2005 L. Speedy LSB285  
*Viola pubescens* Ait. var. *scabriuscula* Schwein. ex Torr. & Gray, 2005 L. Speedy LSB248  
*Viola sagittata* Ait. var. *sagittata*, 1969 W.E. Buker s.n.  
*Viola sororia* Willd., 2005 L. Speedy LSB54  
*Viola striata* Ait., 2005 L. Speedy LSB368  
*Viola x palmata* L (pro sp.), 1951 L.K. Henry and F.H. Beer s.n.

**Vitaceae**

*Parthenocissus quinquefolia* (L.) Planch., 2005 L. Speedy LSB294  
*Vitis aestivalis* Michx. var. *bicolor* Deam, 1951 W.E. Buker s.n.  
*Vitis cinerea* (Engelm.) Millard var. *baileyana* (Munson) Co-meaux, 1919 E.M. Gress s.n. **G4G5**  
*Vitis riparia* Michx., 2006 L. Speedy LS-06-492  
*Vitis vulpina* L., 1994 J.A. Isaac 6047

**GYMNOSPERMS****Cupressaceae**

*Juniperus communis* L. var. *depressa* Pursh, 1916 O.E. Jennings and G.K. Jennings s.n. **G5:S2**  
*Juniperus virginiana* L. var. *virginiana*, 2006 L. Speedy LS-06-911

**Pinaceae**

*Larix kaempferi* (Lam.) Carr., 2006 L. Speedy and J. Nusser LS-06-607-1 Japan  
*Picea glauca* (Moench) Voss, 2005 L. Speedy LSB1180  
*Pinus banksiana* Lamb., 2006 L. Speedy and J. Nusser LS-06-550-1  
*Pinus resinosa* Ait., 1979 P. Singleton and D.E. Boufford and E.W. Wood 7  
*Pinus strobus* L., 1919 O.E. Jennings s.n.  
*Pinus virginiana* P. Mill., 1913 O.E. Jennings and G.K. Jennings and A.R. Hillard s.n.  
*Tsuga canadensis* (L.) Carr., 2006 L. Speedy LS-06-22

**Taxaceae**

*Taxus canadensis* Marsh., 1919 O.E. Jennings s.n.

**LYCOPHYTES****Lycopodiaceae**

*Lycopodium digitatum* Dill. ex A. Braun, 2006 L. Speedy and J. Nusser LS-06-542

*Lycopodium hickeyi* W.H. Wagner, Beitel & Moran, 2006 L. Speedy and J. Nusser LS-06-546

### Lygodiaceae

*Lygodium palmatum* (Bernh.) Sw., 1999 B.L. Isaac and J.A. Isaac 12066

## PTERIDOPHYTES

### Aspleniaceae

*Asplenium platyneuron* (L.) B.S.P. var. *platyneuron*, 1999 B.L. Isaac and J.A. Isaac 12077

*Asplenium rhizophyllum* L., 2005 L. Speedy and M. Bowers LSB878

### Dennstaedtiaceae

*Dennstaedtia punctilobula* (Michx.) T. Moore, 2005 L. Speedy LSB917

*Pteridium aquilinum* (L.) Kuhn var. *latiusculum* (Desv.) Underwood ex Heller, 1954 L.K. Henry s.n.

### Dryopteridaceae

*Athyrium filix-femina* (L.) Roth ssp. *angustum* (Willd.) Clausen, 2005 L. Speedy LSB1175

*Athyrium filix-femina* (L.) Roth ssp. *asplenioides* (Michx.) Hulten, 1954 L.K. Henry s.n.

*Cystopteris bulbifera* (L.) Bernh., 2006 L. Speedy LS-06-493

*Cystopteris fragilis* (L.) Bernh., 2005 L. Speedy and M. Bowers LSB879

*Cystopteris protrusa* (Weatherby) Blasdell, 2005 L. Speedy LSB273

*Cystopteris tenuis* (Michx.) Desv., 1996 B.L. Isaac and J.A. Isaac 8921

*Deparia acrostichoides* (Sw.) M. Kato, 2005 L. Speedy LSB1189

*Diplazium pycnocarpon* (Spreng.) Broun, 2005 L. Speedy LSB981

*Dryopteris carthusiana* (Vill.) H.P. Fuchs, 2005 L. Speedy LSB945

*Dryopteris cristata* (L.) Gray, 2003 S. Ernst and E. Zimmerman 148

*Dryopteris goldiana* (Hook. ex Goldie) Gray, 2005 L. Speedy LSB1161

*Dryopteris intermedia* (Muhl. ex Willd.) Gray, 2005 L. Speedy LSB1507

*Dryopteris marginalis* (L.) Gray, 2005 L. Speedy LSB1139

*Dryopteris x triploidea* Wherry, 1995 B.L. Isaac and J.A. Isaac 8335

*Onoclea sensibilis* L., 2005 L. Speedy LSB1202

*Polystichum acrostichoides* (Michx.) Schott var. *acrostichoides*, 2005 L. Speedy LSB902

*Woodsia obtusa* (Spreng.) Torr. ssp. *obtusa*, 1940 E.T. Wherry and J.M. Fogg Jr.

### Equisetaceae

*Equisetum arvense* L., 2005 L. Speedy LSB295

*Equisetum hyemale* L. var. *affine* (Engelm.) A.A. Eat., 2006 L. Speedy LS-06-19

### Hymenophyllaceae

*Trichomanes intricatum* Farrar, 1984 J.C. Parks 4381

### Ophioglossaceae

*Botrychium dissectum* Spreng., 1995 B.L. Isaac and J.A. Isaac 8344

*Botrychium virginianum* (L.) Sw., 2006 L. Speedy LS-06-238

### Osmundaceae

*Osmunda claytoniana* L., 1951 L.K. Henry and F.H. Beer s.n.

### Polypodiaceae

*Polypodium appalachianum* Haufler & Windham, 1951 L.K. Henry and F.H. Beer s.n.

### Pteridaceae

*Adiantum pedatum* L., 2005 L. Speedy LSB1142

### Thelypteridaceae

*Phegopteris hexagonoptera* (Michx.) Fee, 2006 L. Speedy LS-06-484

*Thelypteris noveboracensis* (L.) Nieuwl., 2005 L. Speedy LSB1174

*Thelypteris palustris* Schott var. *pubescens* (Lawson) Fern., 1951 L.K. Henry and F.H. Beer s.n.

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